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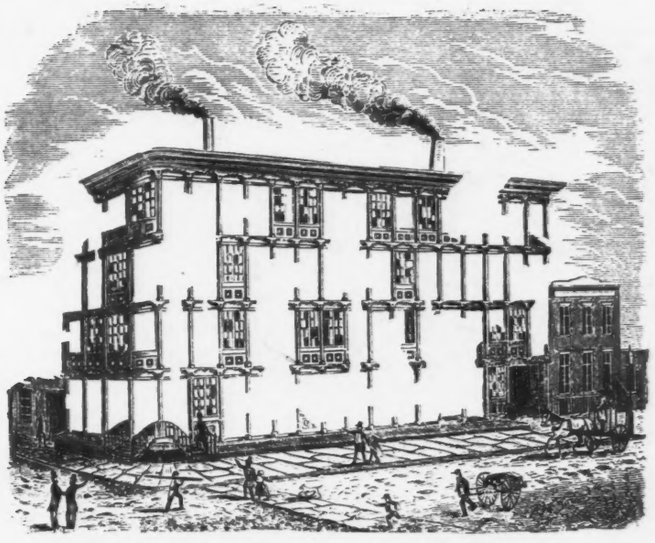

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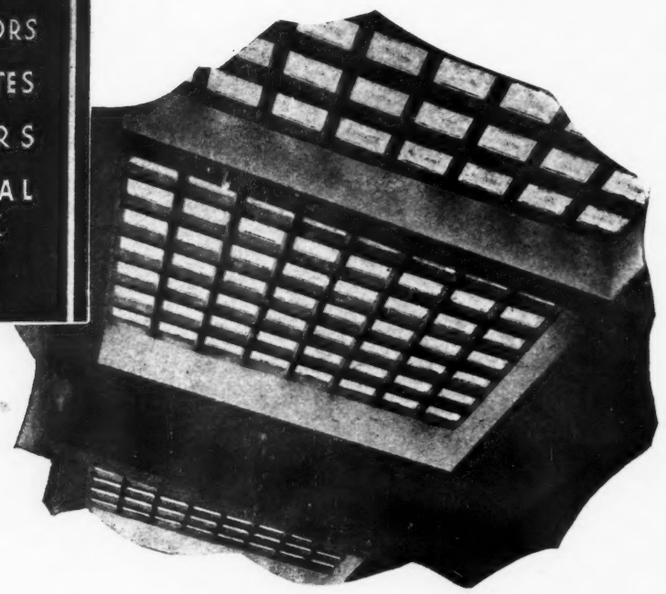

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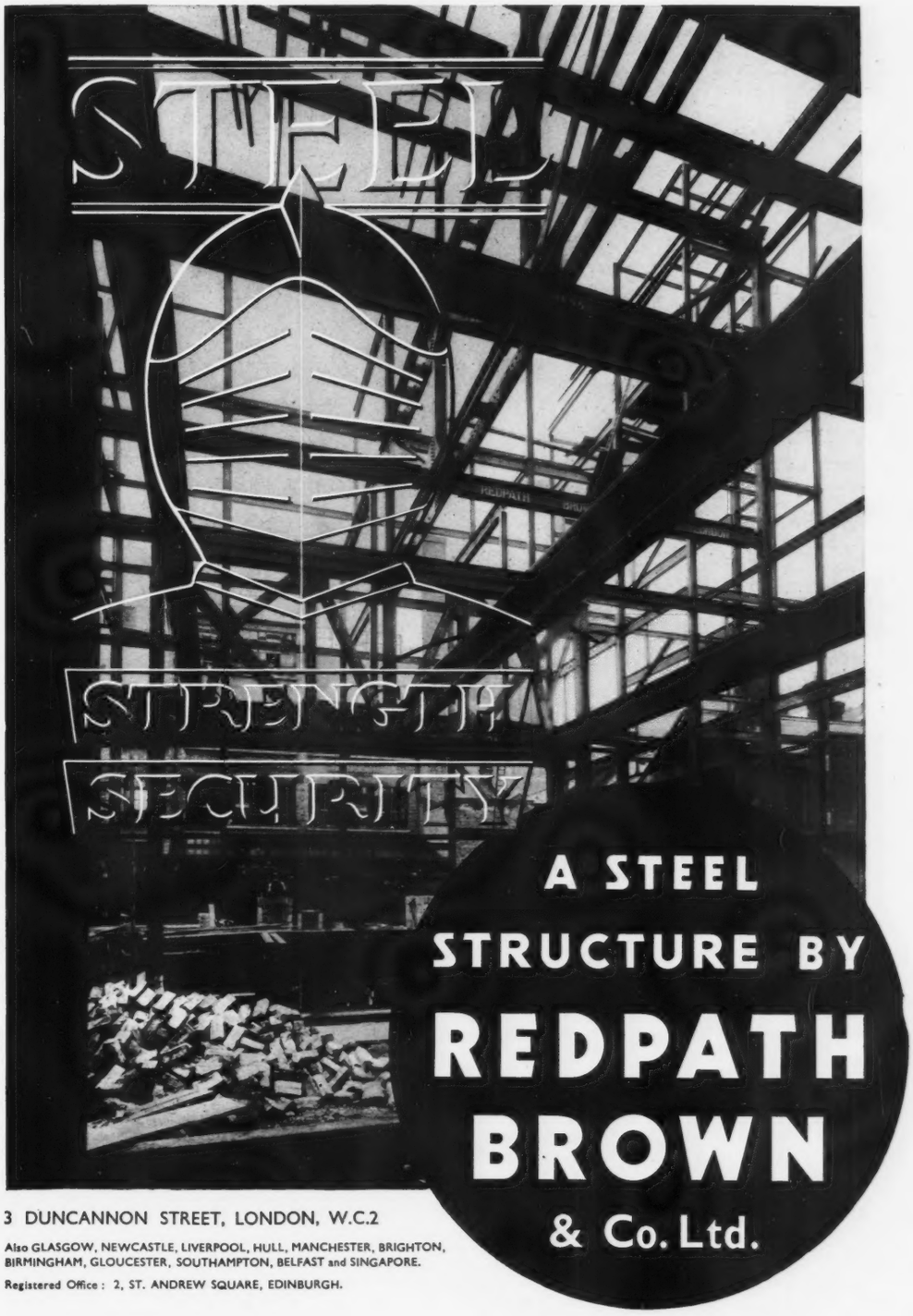

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today

yesterday

Replanning involves preservation of what is worth preserving and can be preserved. In the case of Dundee, how far could a consistent municipal policy have saved the placid atmosphere of the High Street of fifty years ago, or, if it could not be saved, replaced it by something equally coherent and well-mannered? "Building Scotland," a new cautionary guide which is reviewed on page 181, asks such questions by means of pictorial comparisons and suggests answers for post-war conditions.

UNIV. OF MICH.

EMERGENCY DESIGN

This month's Reconstruction Supplement contains, under the above title, a study of such characteristic design as has evolved out of war-time conditions, in the form of a selection of typical products of emergency architectural programmes.

As is explained in the preface to the Supplement, design of this sort is included under the heading of Reconstruction because it is to it we must look for evidence as to our own ability to tackle, sensibly and in a contemporary spirit, all the post-war architectural problems that come under that heading. For it is now generally understood that future problems, political, scientific or architectural, cannot be isolated from present-day ones, since the solutions available in the case of the former will already have been determined by the solutions applied in the latter.

Our design achievements of the moment, therefore, such as they are, can logically be criticized from the point of view of the standards we hope to set in the future, and one purpose of collecting together the examples that occupy this month's Supplement is to see what evidence we can find in them of a new, rational and purposeful design idiom such as emergency conditions ought to foster and such as will serve as the basis of a new *pattern*, the visual expression of Reconstruction's new *order*.

Another thing, however, that our present-day experiences bring home to us is that "design" is not a mere æsthetic attribute of things, not something we shall be gratified to find as an accompaniment of their efficiency. It is itself the *process* of making them efficient—as well as expressive. It is, in fact, the opposite of *laisser-faire*. Like "planning" it is a word that is often used so loosely as to become almost meaningless, but in many senses design and planning are synonymous, denoting the virtue that lies in the proper study and analysis of a problem, together with the means of solution available, before attempting action, denoting in fact the introduction of order in place of muddle and chaos.

What happens when the necessity of design in this sense of intelligent forethought is ignored, when circumstances are allowed to dictate mere hasty expedients, is the subject of the article that follows. The events described therein took place some time ago and the defects mentioned have no doubt by now been remedied, but they are not given attention here as matters of topical importance so much as for the sake of the clear illustration they provide of the rôle of design in the complicated modern world. The designer's task is inextricably tied up with the process of getting things done, and it should be obvious that in times of emergency (to which the cases given below belong), as well as in the better-planned world which the word "Reconstruction" should imply if it means anything at all, an intelligent recognition of the designer's and the planner's part becomes increasingly essential. It is by no means a thing we can afford to dispense with as a luxury.

The following stories sum up, then, in a couple of relatively trivial instances, the whole difference between the old muddle and the new order in the shape of intelligent planning that Reconstruction must substitute for it.

By Norbert Dutton

IT is unfortunate that the designer has not yet achieved the status of an expert; nor is the necessity of approaching problems from the designer's methodical point of view at an early stage appreciated by those in authority. Since there are no accredited specialists in design, questions which would normally come within their scope are referred to other kinds of specialists, such as engineers, doctors and policemen, on the principle that any expert is better than no expert at all. How far this policy is satisfactory is open to discussion. The two typical examples which are the subject of the following notes lend some weight to the view that matters of design need the specialist services of designers.

In the earliest days of A.R.P. it was apparent that the institution in all large towns of public shelters, first aid posts, auxiliary fire service and ambulance stations, wardens' posts, cleansing depots and so forth, would involve a demand for the most complete and effective system of sign-posting. This need was represented to the Government by such designers as could overcome their diffidence at referring to so obvious a matter. As far back as April, 1939, five months before the outbreak of war, the Home Office was urged that "the whole question should be investigated in detail by a qualified designer so that recommendations could be made in time to ensure the adoption of a standardised scheme on a national basis."

With the declaration of war in September the whole vast machinery of A.R.P. sprang into action, and it was immediately clear that the standardised sign-posting of emergency services had not even been considered. Notices to point the direction of the nearest public shelter were hastily improvised by local authorities throughout the country, and a strangely assorted collection they were. The various services were less fortunate, and had to be content generally with directions chalked or laboriously painted on the walls by enthusiastic but unskilled labour.

At this point it was obviously too late for experiment and studied planning. But an emergency plan was submitted to the Home Office to secure that all A.R.P. signs should conform to three basic conditions:—

1. Signs should be standardised throughout the country to secure a maximum and uniform efficiency, and, what was vastly more important, to facilitate mass production, the only means by which the demand could be met at short notice.

2. Signs should be made distinctive, either by the adoption of conspicuous and instantly recognisable symbols, or by the use of different colours to distinguish the various services.

3. Provision should be made for the address of the assembly point referred to to appear on every sign. Persons seeing a sign distant from the point referred to can then proceed directly to it, while if only a vague hand or arrow indicates the direction, they must embark on a sort of treasure hunt, hurrying from one sign to the next and hesitating at every road junction. Furthermore, if the address is given it will fix the location of shelters, first aid posts and wardens' posts in the public's mind, so that they may be reached in the dark or in an emergency with the least delay.

After some six weeks the Home Office replied. They said that "the relevant factors have now been examined. It may be assumed that normally the system of signs adopted by any one authority will be uniform and it is felt that as a practical measure this should go some distance towards securing the objective aimed at generally by advocates of a national system. The force of certain reasons adduced in support of such a system has not been overlooked, but the Minister (of Home Security), after full consideration, has concluded that it would not be practicable to introduce *now* a standardised system for application throughout the whole country." (*Italics mine.*)

This curious argument, translated into ordinary English, runs as follows: "A large number of local authorities are producing individual schemes. It may be assumed that each authority will be content with one scheme, and will not produce several. If each authority produced several schemes there would be even less standardisation than there is now."

On September 1, 1939, a memorandum had been circulated to local authorities directing that location and direction signs be erected immediately. These unfortunate bodies were left to make their own individual arrangements for the planning, purchase and erection of signs, regarding which they had had no previous instructions—exactly two days before the declaration of war. The circular stated that "it was not intended to prescribe any particular pattern for either location or direction signs," ruling merely that direction signs should consist of "a simple description of the depot concerned, an arrow pointing in the direction of the premises, and an indication of the distance thereto." A moment's consideration will show that this requirement involves individual production, since signs pointing in the same direction in any given street must be placed at varying distances. Thus the authorities were precluded from using printing, or any complete form of mass production.

A subsequent memorandum laid down that signs indicating the direction of public shelters should state the number of persons to be accommodated. This is typical of the official policy of avoiding the important issues and imposing irritating minor restrictions which have no usefulness. (It is scarcely necessary to point out that a shelter no longer accommodates a hundred persons if ninety-eight have already gone in; the information is accurate, therefore, only when the shelter is not in use.)

For a time little more was heard on the matter, but the Ministry evidently experienced some misgivings, for on December 4 there appeared another memorandum, which stated that while "many local authorities have already made adequate provision in respect of A.R.P. signs . . . it has been represented to the Minister that some of the existing paper signs have become destroyed or illegible, and in some of the larger and more densely populated areas difficulty might be experienced by strangers in finding their way in black-out conditions to air raid shelters and first aid posts. Local authorities are therefore asked to review the adequacy of their present arrangements . . ." their attention being drawn to "the Standard Specification for these signs which has been prepared, with this Depart-

ment's approval, by the British Standards Institution."

So, notwithstanding the decision taken after "the relevant factors had been examined" that "it would not be practicable to introduce a standardised system," such a system was in fact introduced—three months after the outbreak of war, and when thousands of pounds had already been spent on inadequate signs.

The specification itself was moderately satisfactory, though still no machinery was instituted for centralised production. With regard to the style of lettering to be adopted, one would have supposed that it was only necessary to select one of the several admirable modern sanserif faces which are available, and reproduce a specimen alphabet. The letter prescribed, however, turned out to be none other than our old friend designed by the Departmental Committee on Traffic Signs, and instead of being reproduced as a guide the alphabet was merely subjected to an analytical description. Sign writers and caligraphers learnt with pleasure and surprise that "the upper edge of the horizontal stroke of the letter A is 37.5 to 40.0 per cent. above the base line," that a G is based on the letter O, and "the length of the horizontal stroke is 27.5 per cent. of the height of the letter and its upper edge is 45.0 per cent. above the base line. The vertical stroke terminates on the base line." But when they had discovered what it was all about, production quickly got under way, and the resulting signs were on the whole satisfactory. They were made conspicuous by the use of large initial letters to indicate the various services, and the authorisation of a single approved specification made it possible at last for the larger manufacturers to make arrangements for some degree of mass production. Many local authorities, however, still felt the need of stating the exact location of premises on direction signs, and so addresses were subsequently added; but since no provision had been made for their inclusion they militated somewhat against the legibility of the sign as a whole.

It will be seen that the recommendations put forward in September were all eventually put into practice, though in a haphazard and incomplete fashion, and not as the result of any unifying plan. An acceptable degree of efficiency was finally attained only after several months of inadequate provisions; and during this period the Home Office, in imposing the individual production of signs, achieved the least satisfactory result, with the maximum of effort by everyone involved, at a cost which, in the aggregate, can only be described as fantastic. It would be difficult to find a more unanswerable case for the designer in civil administration.

My second example concerns emergency traffic directions. At the outset of the air raids on London in September, 1940, a number of main traffic routes throughout greater London were blocked either by bomb craters or by debris from demolished buildings, and a considerable diversion of road traffic became necessary. A large number of police were drafted to traffic control, but it was obviously impossible to put a pointsman at every road junction, and diversion signs supplied by the Automobile Association were used. Where the diversion was a simple deviation from a main route which it subsequently rejoined, these were adequate; but in many cases the diversion short-circuited an important road junction, in which case the main routes were rejoined by various alternative branches of the diverted route according to the destination required. In such cases some clear directions for traffic became essential. Bus drivers and private motorists, diverted from their accustomed routes, became lost in the maze of back streets which border the main thoroughfares. Policemen on point duty were overwhelmed with requests for directions, and traffic brought to a standstill while they supplied it. It was, moreover, frequently inaccurate, since the police were unaware of road conditions beyond their immediate vicinity. At many road junctions directions to motorists were chalked on the wall, or written on roughly improvised signs. These improvised directions were hopelessly inadequate, and were apparently not controlled by any responsible authority. The temporary blocking of traffic routes is an obvious consequence of aerial bombardment, and the public was not unjustified in supposing that the necessary provisions had been made by the authorities. When it became apparent, however, after several days of increasing traffic disorganisation, that the contingency had been neither foreseen nor provided for, an emergency plan was put before the Minister of Transport for dealing with it. The main features of this plan were as follows:—

1. The provision of boards, similar in size to the diversion signs, made of water-proof cardboard, wall-board or some such cheap and readily obtainable material, and provided with means for fixing to lamp-posts or street railings.

2. A printer, or printers, to stand by ready to print paper signs with the names of routes or destinations to be set in legible type and pasted on to the boards.

3. Arrows, to indicate the direction of the route to be followed, to be supplied separately on rigid material, with provision for fixing to the signs at the point of erection, and pointing in any required direction (left, right or vertically). The diversion signs, on which the arrow is not reversible, frequently indicated the contrary direction to that required, and so had to be affixed on the opposite corner, where they could not be seen by approaching traffic.

4. On a route being rendered unusable, the names of the various principal points to be reached by diversions would be run off immediately in quantities of a dozen or so of each, according to the importance of the route, and pasted on to boards. This could be done in two or three hours if machines and compositors were held in readiness.

5. The route would then be surveyed by a fast mobile squad, in collaboration with the local police, and the signs affixed at all necessary road junctions. Since both the signs and the arrows would be removable, the system would be flexible, and in the event of any part of a diverted route being subsequently rendered unusable, the signs could be instantly adapted to indicate fresh diversions. After use, the boards to be returned to the printers for re-use by pasting on new names.

6. Consideration to be given to the possible use of arrows of distinctive colours: e.g., red arrows to indicate City-bound routes, blue for the West End, etc. Such a system could be efficiently organized and put into operation within a few days.

After three weeks, during which the bombing continued and the disorganisation of traffic steadily increased, the Ministry replied as follows:—"In the London area the Automobile Association have been very helpful in supplying local authorities with stocks of blank panels bearing merely an arrow indicating the route to be taken so as to rejoin the major route beyond the seat of the trouble, and, in general, the system seems to be working extremely well.

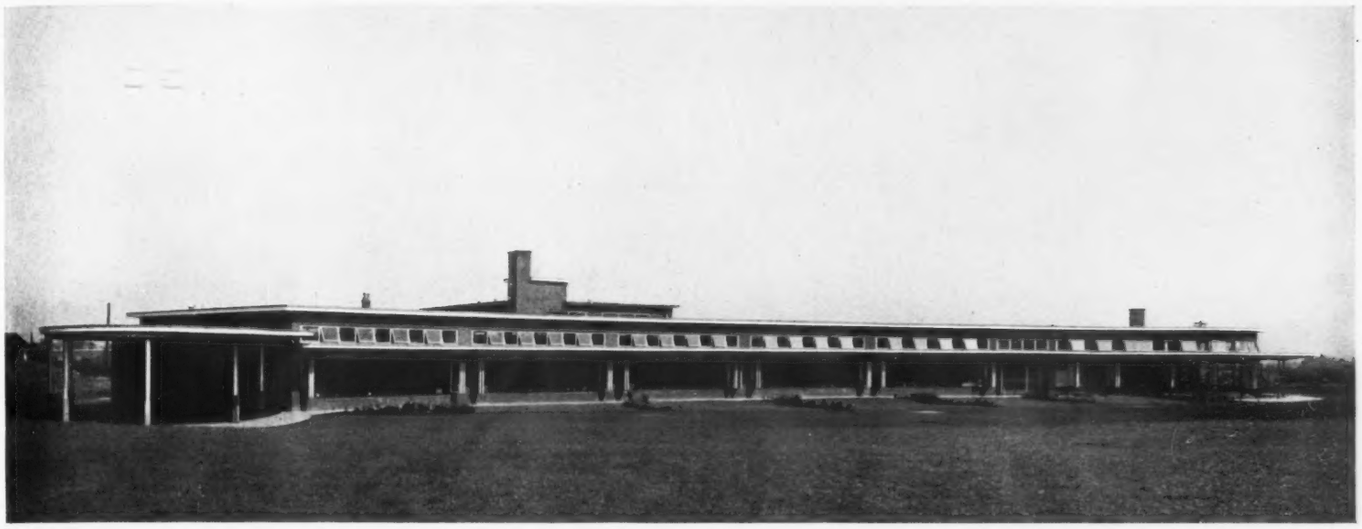
"In the Provinces a system similar to that which you advocate was visualised before intensive bombing was experienced, and the highway authorities were encouraged to accumulate blank panels for use in emergencies. You will, of course, appreciate that it would not be possible to print the names of destinations, in view of the decision taken some months ago to remove all signs bearing place names from the highway system of this country.

"Whilst it is probable in certain areas that have been intensively bombed that traffic will be dislocated for a time, it is, nevertheless, hoped that the arrangements which have been made with the highway authorities and the Police will enable them to cope with the situation."

This communication deserves one or two comments. The first paragraph blandly affirms that the system "seems to be working extremely well" when it was, in fact, manifestly working extremely badly. And one wonders why, in a matter of such vital importance, the authorities should leave it to a private organisation to be "very helpful." The precise purpose of the blank panels which the highway authorities had been encouraged to accumulate is not clear. If it was permissible to display panels on which directions were written by hand, it was obviously possible to display panels on which the directions were printed, since the only difference is that printed directions are legible, and are produced more rapidly and in greater numbers. In either case the signs are merely temporary, and can be dismantled with equal ease and speed if the necessity should arise. One is therefore forced to the conclusion that these blank panels were intended to retain, when erected, their original blankness.

The last paragraph expresses, characteristically, the pious hope that things will somehow right themselves before the necessity for Departmental action becomes inescapable. But Departmental action, surely, has the primary duty of *forestalling* the chaos that arises when plans have not been made in advance. And *planning*, in the cases instanced above, was synonymous with *designing*.

INFANTS' SCHOOL AT CASTLEFORD, YORKS



1

OLIVER HILL, ARCHITECT

1, general view of the school with the shallow terrace in front of the classrooms, the covered play terraces on the left and the right and the slightly raised assembly hall at the back. 2, one of the classrooms with sliding and folding window and free arrangement of furniture.

This school, built for the West Riding County Council, is at Whitwood Mere, near Castleford, which lies less than ten miles east of Leeds. That part of Yorkshire has preserved little of its natural beauties. It is featureless country bounded to the north by the river Aire and on all sides by mine shafts and factory chimneys. The river is polluted by the refuse that runs into it from the mills higher up, and nearly all the mills are the work of a period unable to imagine industrial architecture as anything dignified and orderly. There is no more depressing sight than these grimy factories with the untidy sheds, steel structures and dumps surrounding them.

An infants' school in such a neighbourhood has the duty to neutralise as far as possible the pernicious effects of life in such an atmosphere. Children, if they have to grow up where their senses will be blunted by ugliness all day and every day, should at least be given the benefit of cleanliness and cheerfulness during the hours that they spend at school. Oliver Hill, in designing the school at Castleford, felt this responsibility strongly.

2

He shaped the building so that it should stand on its own as a configuration independent of the character of the countryside around, though in an attitude which, thanks to the sweeping convex curve towards south, has nothing forbidding.

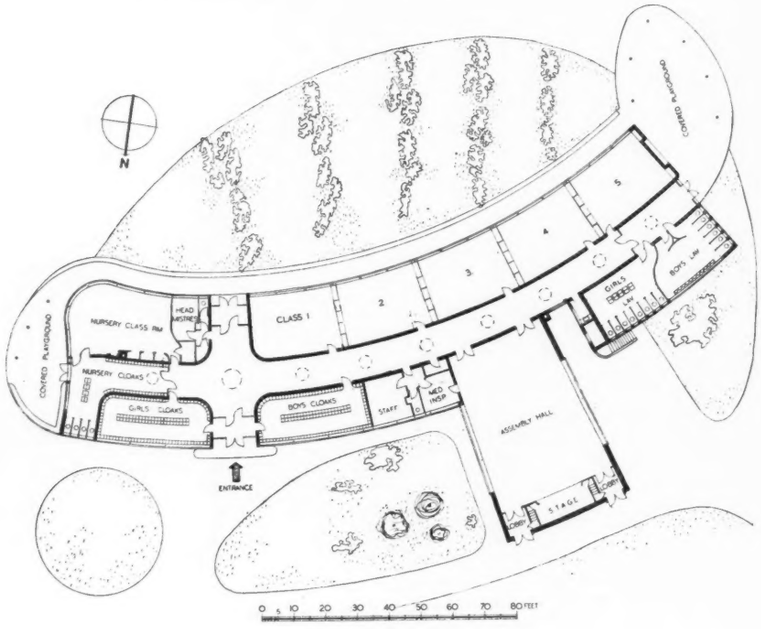
Even the fact that it is all of only one storey does not make it merge into the plain in which it stands. The assembly hall is carried up slightly higher than the classrooms and crowned by a chimney that forms an integral part of the school's skyline, in a way first conceived by Dudok.

All the classrooms face south, five for the infants, and one, separated from the others by the exit towards the garden and the headmistress's office, for the nursery class. A shallow terrace runs in front of all these rooms and opens out at the west and east ends into covered playing areas of free parabolic shapes. The classrooms have large windows below the hood which covers the terrace and smaller clerestory windows above. Light can thus penetrate into the farthest corners without being obstructed by the hood.

A spacious corridor with circular domed skylights runs right through the building, dividing the classrooms on the south from cloakrooms, lavatories, the main entrance and the assembly hall on the north. The assembly hall is placed at right angles to the rest of the building so that its shape provides a vigorous break in the simple main curve.

The convex north wall is faced with rectangular jade green faience slabs incised with a long frieze of life-size galloping animals by John Skeaping, a piece of design, full of life and rhythm and easily appreciated by children, giving just the right animation to an otherwise somewhat austere façade. A glazed double door leads into the entrance hall, which is given the shape of a Greek cross with boldly rounded corners. Opposite the main entrance is an exit towards the grounds. It is of the same width and glazed in the same way as the entrance door so that a feeling of light and airiness, in conscious contrast to the closed appearance of the entrance side, is created as soon as one enters the building.

The entrance is placed asymmetrically, to stress the main functional division of the school. On its right are the infants' classrooms, on its left the self-contained nursery department. The nursery classroom curves with a wide expanse of glass round the south-east corner. In front of its east side is the covered nursery play terrace with a protecting wall of glass bricks towards the north. Seats are provided along the sheltered west and north walls.



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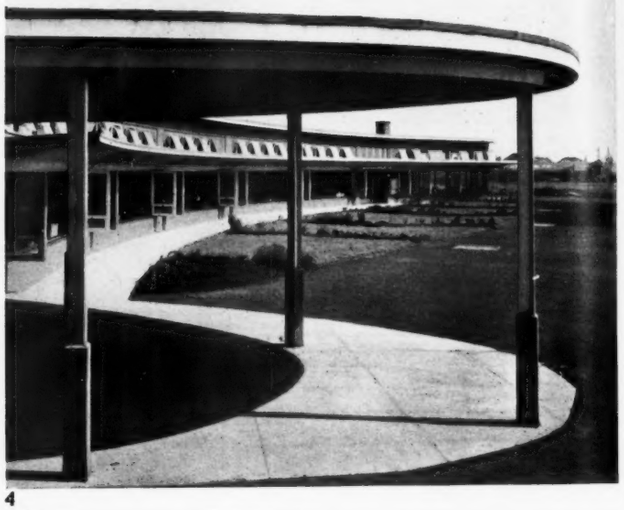
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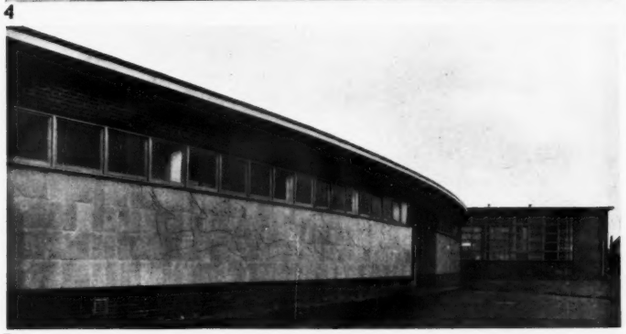
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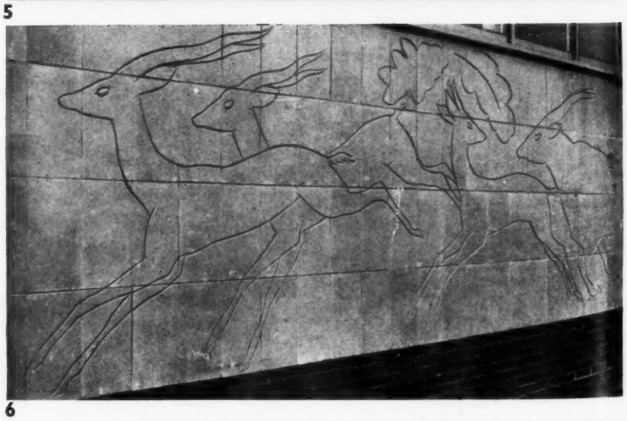
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3 and **4**, the south terrace towards east and west. **5**, the entrance side facing north with the assembly hall at the back. A frieze **6**, of incised life-size animals runs along the whole length of this part of the façade. It is the work of John Skeaping.

INFANTS' SCHOOL AT CASTLEFORD, YORKS.

7

The classrooms have folding and sliding windows which can be opened full width. The teak sills are so low that the children can look out over them and climb on to the terrace. In fact, proportions throughout are keyed down to the size of the infants for whom the school is built.

Colour has been used plentifully and in the school, too, the shades used being judiciously chosen. No room has all walls in the same colour. The strongest scheme is used for the corridor in which nobody spends a long time. Here one wall is tan, the other buttercup yellow and white. All dadoes are washable to beyond finger height. Those in the classrooms are of lightly mottled linoleum, on which posters and cut-outs can be pinned at children's eye-level. The same linoleum in contrasting colours is carried over the flush-fronted built-in cupboards. The hinged and reversible blackboards are in effect yellow; the chalk used being pale blue.

8

9

7, the nursery classroom. **8**, the entrance hall in the shape of a Greek cross with rounded corners. **9**, the assembly hall with the raised stage at the back.

10

11

In the assembly hall the decorative frieze of posters behind the stage was executed specially for the school by the pupils of an adjoining senior school. The doors throughout are flush, faced with oiled teak that takes any amount of wear and tear. They are pierced with bulls' eyes glazed with wired plate-glass at children's level and fitted with self-closing springs. They have substantial rubber protected edges and are set in metal frames enamelled bright orange.

The floors are laid throughout with polished cork tiles and the floors of the cloaks and lavatories with encaustic tiles. By means of fibreboard ceilings and cork tile floors heat variation has been as far as possible obviated and noise reduced.

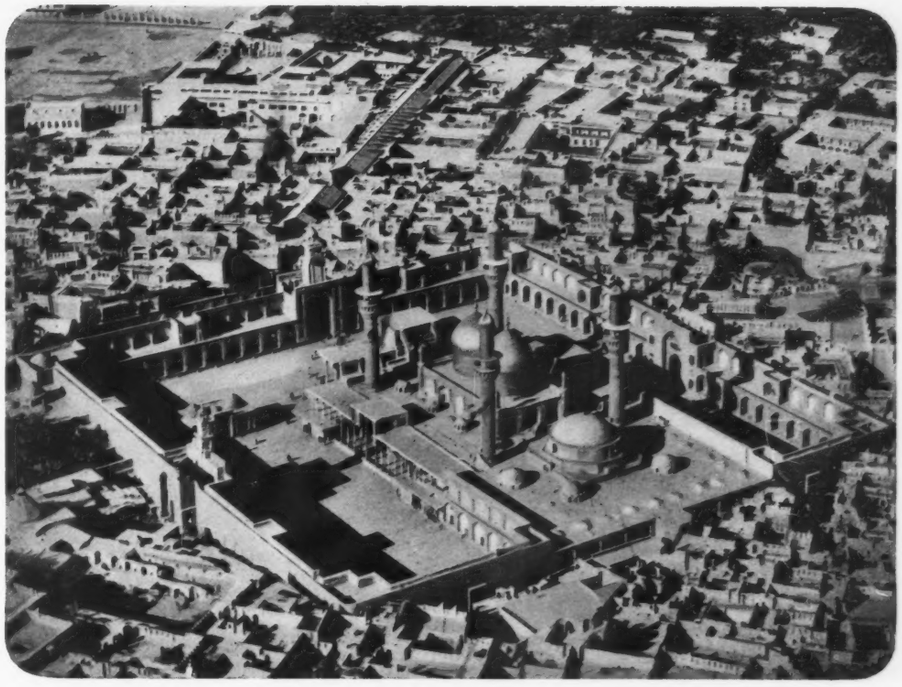
12

13

10, the corridor with its domed skylights. One wall is tan coloured, the other buttercup yellow and white. **11**, the nursery lavatories. **12**, a classroom in use. **13**, a lesson in the sheltered north-east corner of the covered play area of the nursery department.

INFANTS' SCHOOL AT CASTLEFORD, YORKS.

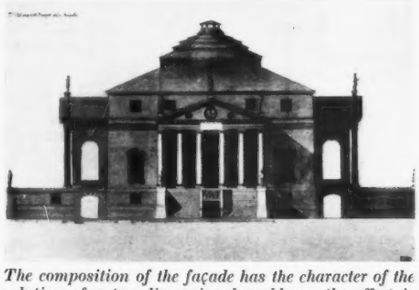
That architecture is the sensation of space was the theme of an article in last month's issue. This article takes the same process a stage further, and analyses the sensation of space in relation to the town: particularly in relation to the changing form of the town which has resulted in changes in the way in which space is apprehended. In the photograph of Baghdad on the right, urban architecture displays clearly its identity with enclosure, even in the open air. In the tangle of streets and bazaars, separated from the outside by a wall, stands the enclosure of the mosque. The space is rigidly defined, but will be comprehended only after penetrating through the gates, as it were into a different world.



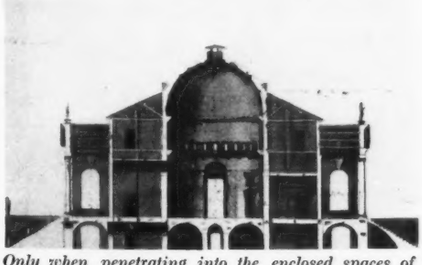
Urbanism and Spatial Order

By Ernö Goldfinger

The effect of the free-standing building is similar to that of sculpture: the play of light and shade on the plastic shapes.



The composition of the façade has the character of the solution of a two-dimensional problem: the effect is pictorial.



Only when penetrating into the enclosed spaces of the inside will there be experienced a spatial sensation.

IN an article published last month we discussed the nature of enclosed space and its psychological effect, *the sensation of space.* The next thing to do is to see how these speculative considerations affect the concrete fact of architecture. The object of architecture is to fulfil a specific social function, *i.e.*, to provide an ordered enclosure for human activities. The fact that one set of enclosures has a roof (a shelter or edifice), and the other has not (a street or garden), is merely a difference of amount of enclosure and does not, as we have seen previously, alter the nature of enclosed space. Human activities are physiological, and it is essential to note that not only physical, but psychological effects, form part of the physiological phenomena. Therefore architecture, apart from its physical object (shelter, etc.), is also an instrument of psychological effect: the spatial emotion.

Having this in mind we find that architecture results from the integration of three factors: the purpose for which it is made, the possibility of making it, and the effect it produces. That is to say: the functional needs, the constructional means and the emotional effect. If æsthetic problems are not considered as part of normal human activities they become baffling and incomprehensible: the supernatural has to be roped in and the whole affair becomes a mystic speculation reminiscent of witchcraft and demonology. It is imperative for the understanding of architectural æsthetics to interpolate them into the general pattern of social conditions and their historic evolution. Without this historic implication, persons may imagine themselves as so many little "time machines" roaming to and fro in eternity, picking up connections here and there, at their will and pleasure. Whereas in fact they are time and space bound, chained to the fate of the human adventure.

The human adventure is the story of social evolution: that of technology, economics and politics; and architecture is an integral part of it, for it is not possible to place a style or comprehend the aims and effects of spatial order without tying it to social conditions. It is, for example, of vital significance whether it is a god, a king or money which governs the people, fascinates their mind and for which temples, palaces or banks are erected. Architecture is the ordered shell, and also one of the actors, in the human drama itself.

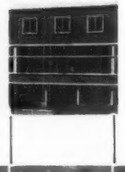
We can follow in the evolution of architecture the constant struggle of conflicting factors: functional demands, constructional means and the resulting enclosed space. There is no set relationship of these factors, neither in space nor in time: *new technics of construction make new functional demands possible and new functions engender new technical answers; interlocked and ever changing they produce enclosed space which, at its best, is architecture.* From the point of view of our inquiry there is, nevertheless, one constant similarity in all enclosed spaces. The "user" will always be *within* the enclosed space, and enclosed space has derived significance, as last month's article explained, precisely from the point of view of the person within, who is automatically subjected to a spatial sensation.

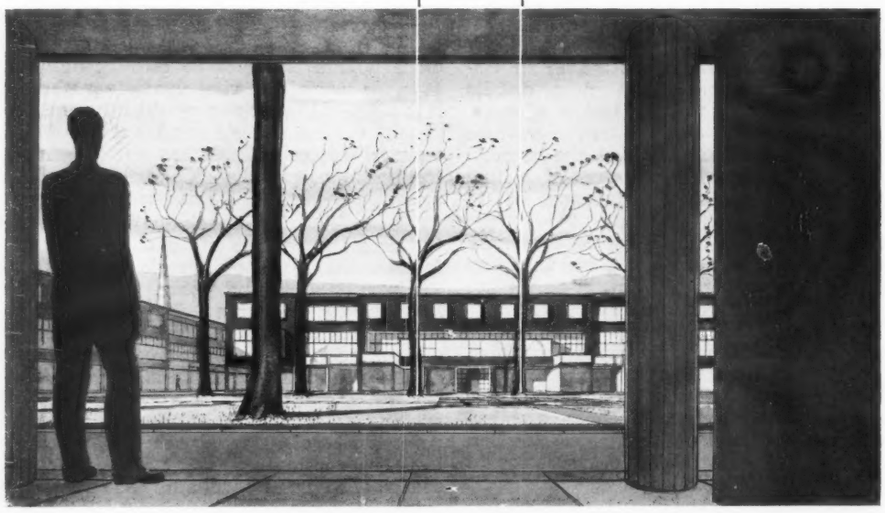
These rather elementary points having been made clear, we can now proceed to the examination of some concrete examples. First we may consider the case of a free-standing building. On approaching it, no sense of enclosure is experienced from it and the effect is purely *plastic.* It is in fact a piece of abstract sculpture; the play of light and shade, the massing of volumes and shapes can be observed and appreciated. On approaching, we reach a point where the field of vision may no longer embrace the whole of the edifice and may be only one plane within it. The effect at this point will be *pictorial,* that of an organised surface. It is only after penetrating through the entrance that we are subjected to a *spatial sensation.* One and the same building will thus be instrumental in creating consecutively a triple set of sensations; *plastic, pictorial and spatial;* each of them of an entirely different order. Only the last mentioned, the spatial sensation, is a specifically architectural effect.

Medieval towns, even large ones like London, presented themselves from the outside as a comprehensive whole, comparable with a free-standing edifice. The steeples of the churches, higher than the highest house-tops, and themselves dominated by the cathedral, larger and more important than anything else, presented altogether a unified panorama. The cathedral was the symbol of the link with the outside world and also the focal point of the town. The focal point of Wren's plan of London was the Stock Exchange. On the right is a view of London in 1616—still mainly medieval — by Visscher.

From the point of view of the town, the individual building is a mere brick in the spatial order of the street or square.

The façade, however, is also part of the screen or wall which separates the urban spaces from those beyond, the public urbanity from the unknown of the individual privacy.





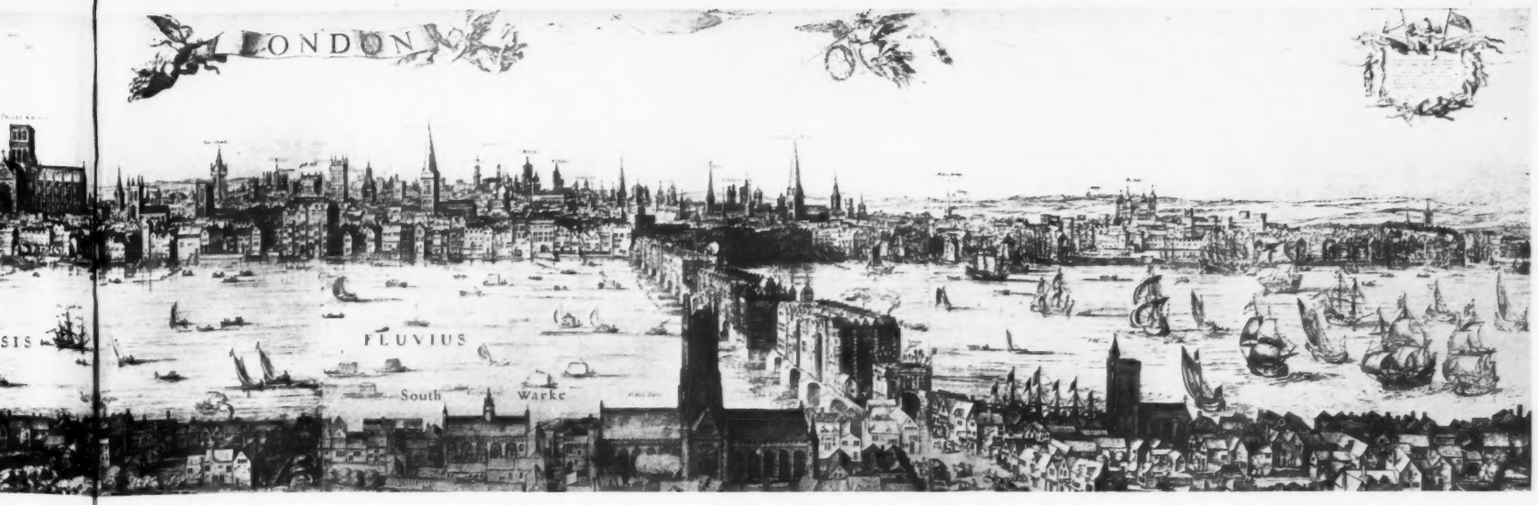
The walls of a building (even if they are transparent) are to a person inside, screens separating the enclosure he occupies from the urban spaces beyond. But to a person outside, these same walls are screens delimiting the street, itself an enclosure.

If we investigate further and consider buildings in relation to each other, we shall find that these buildings, which we have first considered separately and by themselves, can when combined with other buildings form parts of an enclosure and therefore form parts of a spatial order.

This is what happens in urban agglomerations. Here each building must be considered in relation to other buildings and to the open spaces left between them. We see thus that buildings may fulfil a dual purpose; while inside them enclosed spaces are provided for certain functions, their outsides form part of another, a civic, order for another set of functions. The same applies from the point of view of spatial order: on the one hand, inside the buildings a sequence of delimited spaces is provided; on the other hand, the outside of these same buildings becomes part of streets, squares, etc., forming urban spaces. So we come to consider not only the spatial arrangements in the buildings themselves, but those created by the juxtaposition of buildings in which each self-contained edifice is a mere brick in the spatial order of the town. One and the same edifice performs this dual and somewhat contradictory function.

For a person inside an urban edifice the enclosing walls constitute barriers separating him from the "spaces beyond," which in this case are the streets, squares, etc. He is clearly within a spatial order, separated from something he cannot experience at that moment, and which constitutes for him the outside world. If we, on the other hand, consider a person in a street or a square, for this person the outside walls of the houses, subjectively, constitute the inside screens delimiting the street or square. He is within a spatial order, separated by these screens (the outside walls of the houses considered above) from a world beyond, which (in this case), may be the inside of a building. Nevertheless, while being "out in the street" he is "within" the street and consequently within a spatial order. When going through a doorway of a building he will go *into* the building or (the other way round) *into* the street. Note that you are *in* the street even if you are *out* of doors.

If we next want to consider the town as an entity, it will help to go back to historic examples. Consider, for instance, the fortified townships of medieval times, or a seventeenth or eighteenth century fortress town. Either of these is in some respect similar to a free-stand-



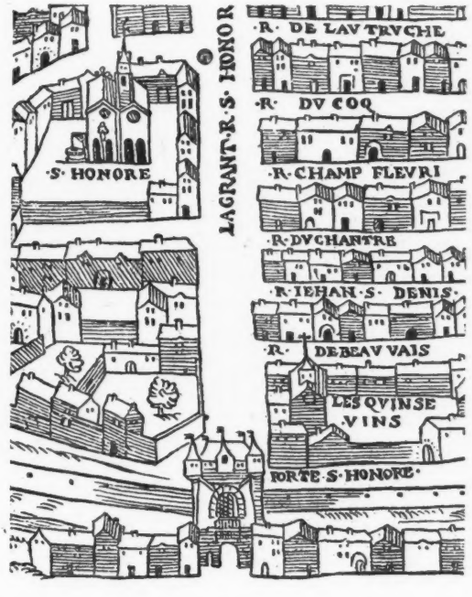
ing building. The agglomerations of buildings of which they consist are considerably smaller than they would be to-day, their perimeter is precisely defined, the whole can be contemplated from the outside. Even if we consider a very large medieval town, London for instance, the same still applies. From the heights of the north, or across the river from the south, or when sailing up the river, the town was within the field of vision. The dominating feature was that of the huge cathedral towering over everything. Indeed, on approaching, before anything else of the town was visible the towers and roof of the cathedral loomed above the trees of the surrounding countryside. Then the spires of the churches, the disorderly mass of the roofs of the houses and underlining it all the city walls, appeared each in its turn. This was a plastic arrangement, perhaps not consciously composed, perhaps not quite neat and clear, but nevertheless conceivable as a whole. We can follow the traveller approaching; the plastic apparition vanishes, and when he draws near the city gates the arrangement becomes pictorial. Not till he penetrates into the city through the gates is he subjected to a spatial sensation.

The same applies to the post-fire, the baroque London. The town has grown, but not enough to destroy the possibility of contemplation from without. The new, the domed cathedral erected in the continental, modernistic style was even more than the old one designed to be seen from far away over the roof-tops in all its plastic splendour. While travelling down the river in a barge (the most usual method of locomotion in seventeenth century London) the observer saw St. Paul's dominating the city, its spires and roofs shoulder-high. From the river the whole still appeared as a plastic panorama.

But to-day the scene has completely changed. Even in the exceptionally favourable case of the approach down the river (no longer a usual way of travelling), the confusion that unfolds is incredible. The spectator is no longer outside, he is in the midst of it all. It is true that St. Paul's still manages somehow to struggle above some of the city roofs, but no longer with medieval vigour or baroque ease. Cities generally, in fact, no longer present themselves as neat-cut, isolated organisms separated from the surrounding country by moat and wall. They have stretched their tentacles far into the countryside, become interwoven with it. The traveller no longer approaches the city gates from without, on foot or horseback or majestically gliding on the river in a boat. He will enter the city (paradoxically as it may seem) from the inside. He will come by train and disembark at a station in the centre, or (better still) enter the town emerging from underground, having travelled by tube to the heart of the city. The gentle approach by gradual stages has vanished and the direct impact of a spatial order has taken its place.

Furthermore, yet another approach to the town has been added to the new earth-bound means of locomotion; a still newer one, airborne transport. The pattern of the town as a whole, of the streets and squares, of river and gardens, has gained a new significance. No longer can the specialist alone appreciate from his charts and maps and plans the complete pattern of a city; it has become the common domain of all travellers by air. From above the whole picture can be appreciated, before the traveller is gripped on landing by the spatial limitations of the ground. Once more can the scene be grasped from outside, but from an entirely new angle, from an angle never before seen by human eyes, but only imagined.

And not only in the approach to enclosed space



Approaching from outside, only after penetrating through the city gates is the traveller gripped by the tangle of the medieval streets and urban spaces. Left, Paris, 1551 —a plan by Oliver Truschet and Germain Hoyau.

Right, not Venice but Baroque London, with its new Continental architecture presenting a calm and majestic river front, dominated by the "modernistic" dome of St. Paul's and completely free from medieval barbarism. From a painting of the school of Samuel Scott, c. 1750.

The same view to-day. The scale has changed; office-blocks, railway stations and an oily, dirty river dominate the scene. The old unity has gone and there is no new architectural grandeur to the scale of the new epoch.

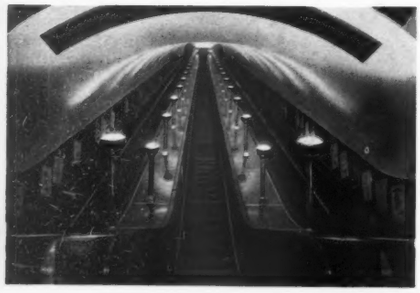
Traffic in the medieval town is mainly pedestrian or horseback. No segregation of traffic is necessary, no pavement.

At the end of the Georgian period : busy streets but complete segregation. The crowds of shoppers protected under the arcades of the Quadrant from the dangers of the coaches.

Approximately the same spot as the last, but a hundred years later. Complete chaos : gaudy architecture out of scale with the street ; domelets and knoblets disrupting the skyline. Compare the calm majesty of its Georgian predecessor with this vulgar ostentation, in addition to which is the unresolved traffic problem.

The problem of to-day : crowds and forty times increased speeds. Order, segregation of traffic on a new scale, is called for.

Underground there is a beginning. . . .



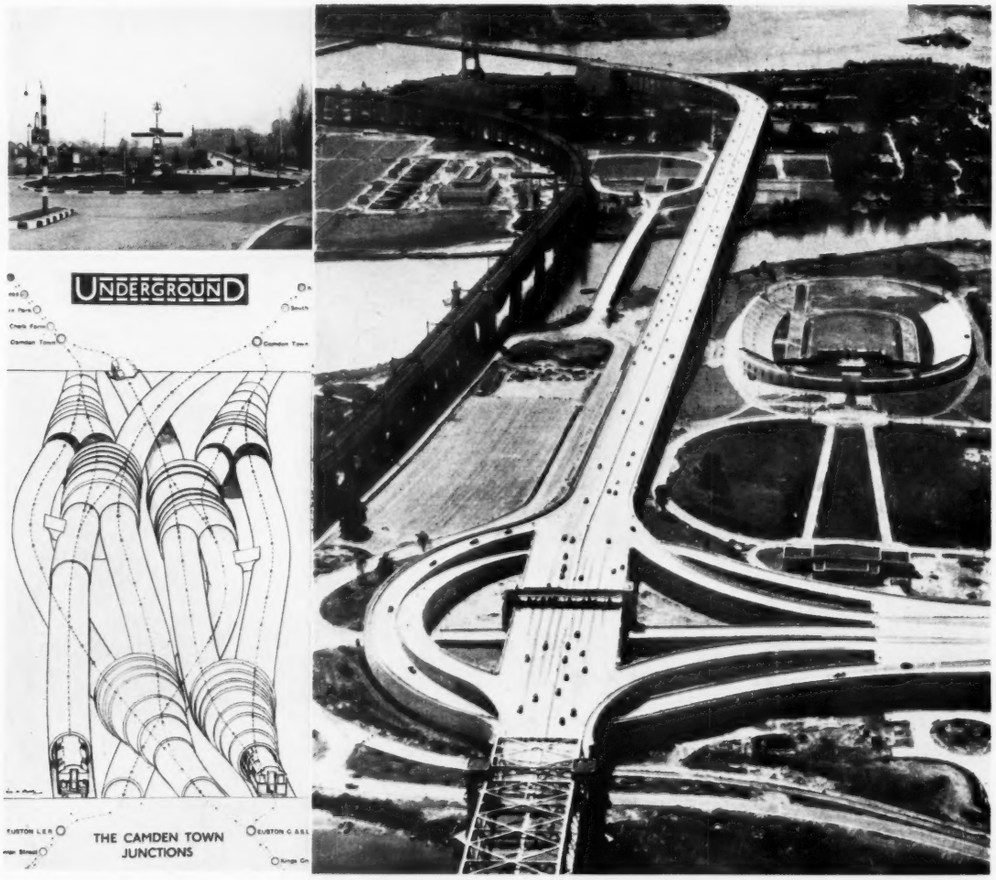
The trains don't run up the escalators and the crowd does not enter the tunnel. The new order has found its spatial expression.

but in the perception of space too, a new element has appeared : high speed. We have seen that spatial perception is kinetic, therefore the speed at which a person subjected to a spatial order moves through it, is of first-rate importance. Inside our buildings we move, on the whole, as in former days, relying on our lower limbs. But outside, the mechanical means of locomotion have completely altered every proportion. The same, geometrically identical, spaces will create an entirely different spatial sensation if experienced while stationary (0 m.p.h.), while walking (2 m.p.h.), while hurrying (4 m.p.h.), from a horse-drawn coach (10 m.p.h.), or from a car (20-80 m.p.h.).

An urban order which has been devised for musing cannot give satisfaction to people whose bare existence, hence their everyday habits, depends on speed. The time factor must be seriously taken into account in the conception of scale in architectural and urban order. The speed of travelling horizontally, which affects the spacing of buildings, and also the speed of vertical travel (in lifts, escalators, etc.), which influences the height of buildings, must both be considered. Both have a preponderant influence on questions like density of populations and sizes of towns. For it must be repeated that only in considering the implication of constructional and functional questions, even seemingly irrelevant ones like locomotion, can there be a real conception of architectural æsthetics.

The conception of spatial order is tied up with technics and social needs and is not, as we have said, absolute in time and space. To find an example how little this is understood we have only to think of the effect of technics on the street, which is well known in terms of historic examples ; but curiously enough its implications are completely ignored when it comes to their application in our time. The medieval street was that of the pedestrian and the rider ; hence there were no pavements. With the appearance of coaches the first segregation of traffic occurs by the introduction of pavements. But since then the demands of motor traffic have been completely ignored apart from the monstrous appliances of beacons, lights, etc., and the pathetic experiments (at a wrong scale) of legacies of horse-drawn times, like the round-about. No account has been taken of the potentialities and spatial exigencies of the eight to twenty-fold increased speed.

A new classification is necessary : classification of traffic, classification of work, classification of dwelling. The emblem : " Halt, Major Road Ahead " is not sufficient. The new spatial order lies on the Major Road. We have seen that the purpose of architecture is not to create a spatial sensation but to fulfil a social function with the best means of an up-to-date technology ; by doing so space is delimited and the sensation of space automatically created. It is the artist who shapes this space, to develop it from the crude by-product of enclosure into a spatial order, not by adding frills or ornaments, but by making the very enclosed space self evident and clear, *i.e.*, by making it Architecture.



The roundabout is the result of failure to understand the utilization of space in the city : a misunderstood problem, the wrong solution at the wrong scale ; hence no spatial solution, only traffic signs. Instead of increasing the speed of vehicles the aim is to hinder their movement. But underground, at least, the way is shown of solving the problem of to-day : speed ; segregation ; the scale is entirely changed (the diagram above represents about a quarter of a mile). The spatial solution of to-day has occasionally been attempted overground : new shapes are born, new possibilities emerge, a spatial order at the scale of to-day is discernible. In spite of the grandeur of this New York highway it is still only a timid beginning. Randall's Island, Cloverley, and the approach to Triborough Bridge. (By courtesy of the Park Commission, New York City).

DESTRUCTION AND RECONSTRUCTION

THE ARCHITECTURAL REVIEW SUPPLEMENT: DECEMBER 1941

BOMB DAMAGE TO BUILDINGS OF ARCHITECTURAL VALUE

LONDON

THIRD INSTALMENT

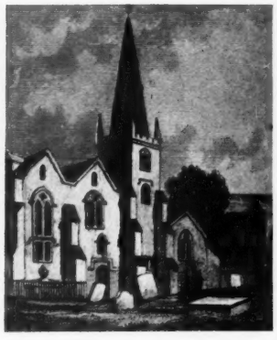
THE HALL OF GRAY'S INN was reconstructed about 1556-59, with a very fine hammer-beam roof curiously enriched with classical detail. In Elizabethan times the Hall was a scene of festive life often visited by the Queen herself, and the fantastic oak screen was said to be her gift to the Inn. Here the *Comedy of Errors* was produced in 1590. The exterior of the Hall was somewhat altered at the same time that the adjoining library was built, in 1839-41. Both Hall and Library have been gutted; and the whole of the fine woodwork is lost. The Chapel (small picture), a small building of very minor interest, had been renovated some years before the war by Sir Edwin Cooper.

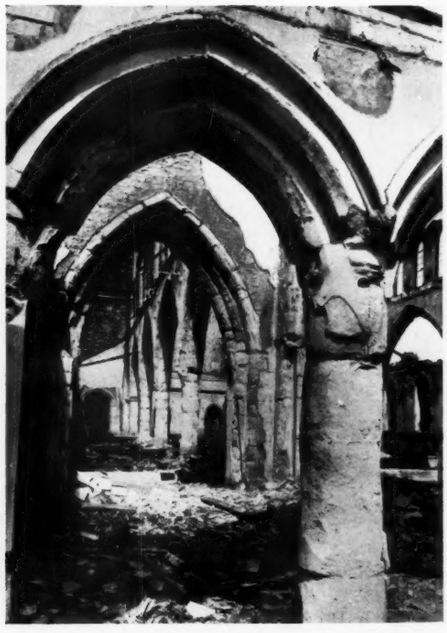
BOMB DAMAGE TO BUILDINGS OF ARCHITECTURAL VALUE

THE TEMPLE CHURCH, the older part of which—the "round"—was consecrated in 1185, is a building which has suffered such dreadful "restoration" that hardly one visible stone of it can be certified as older than the first half of the 19th Century. The mischief was begun by Sir Robert Smirke in 1826, continued by James Savage, Sydney Smirke and Decimus Burton, and completed in 1842. Not only were the ancient carvings replaced with bad fakes, but numbers of memorials were destroyed and the remainder moved to the adjoining yard or fixed in the dark, almost inaccessible, triforium of the "round." Even the Templars' effigies were "restored" and moved to make a neat symmetrical group at the west end. The fire of 1941 over-reached the damage already effected by architects, annihilated the 17th and 18th Century monuments, and reduced most of the Templars to dust. The print (above) shows the church as the restorers left it: the photographs show the devastation of the "round," with the pulverised Templars and fragments of monuments clinging to the triforium walls.

THE DUTCH CHURCH, AUSTIN FRIARS, has been demolished with spectacular thoroughness, only the eastern arches built into a party wall having survived. The building was the nave of an Augustinian church, handed over to the foreign Protestant community by Edward VI and subsequently assigned exclusively to the Dutch. It survived the Great Fire, but was partly burned in 1862 and hideously restored. The arcades and traceried windows were elegant specimens of 14th Century work and are to be regretted along with many beautiful monuments of the 17th and 18th Centuries. Under the débris is still a rich paving of medieval and renaissance grave-stones.

ST. MARY'S CHURCH, NEWINGTON, was the successor of the ancient church of the hamlet of Newington, which stood in Newington Butts. The old church was pulled down in 1790 and replaced by a neat brick box characteristic of the period. This again was demolished when the new church was built in 1872-5. The architect, better known in Lincolnshire than London, was James Fowler.





EMERGENCY DESIGN

THE chief distinguishing quality of all emergency design is that it is design in a hurry. But during war-time it is also design on whose rightness life or death may depend. The street lamp in the blackout if it is too light attracts bombers, if too dark causes accidents. The stretcher if badly designed can be fatal to a fractured spine case. The shelter if illegibly marked remains unused during air raids. The evacuation camp if wrongly constructed may be rat-infested or, worse, infection-breeding.

Emergency design must be rigorously functional and in its meaning self-evident. Moreover, as it is leisureless design, frills are out of the question. Now these specific characteristics of emergency design—fitness for purpose, directness of expression, distrust of applied ornament—happen to coincide with fundamental characteristics of the best contemporary architecture and design. The war and its sudden imperative needs afford thus an opportunity of the first order to the clear-headed and the determined—not only in strategy and diplomacy, but also in design.

New problems faced the planner and the architect the very day the war broke out. The Nazis were in an easier position. They had for years prepared consistently for " the day," and when it had come, all that was necessary was the signal Go, and the machine started smoothly in exact accordance with detailed plans. We had little of that kind over here. The only large scale organisation that was set to work at once, and did work, was the transport of schoolchildren into the country. Beyond that almost everything had to be worked out and decided under abnormal conditions. The billeting of children did not prove a sufficiently satisfactory solution. Special camps had to be provided, with dormitories, assembly rooms, staff quarters, nursery, laundry, etc. Shelters caused much controversy. Type after type was tried out, until some kinds reached a certain degree of standardisation. Shops started protecting their windows in a rough and ready way by means of piled-up sandbags. Car owners painted the backs or some other parts of their cars white as they chose or as changing instruction demanded. Lamps were shaded by brown paper, torches obscured by tissue paper, windows blacked out by anything that could be found in odd corners and odd drawers. During the first war winter these various emergency (i.e., hurried) measures were replaced by more efficient, more standardised, and consequently less unsightly devices.

Then, one year later, the Blitz started, and the same process repeated itself. People, to give just one instance, flocked into the tubes for safety and slept anywhere on the floors. Then berths, canteens, lavatories were designed and built in. Bombed-out people had to be fed in new communal restaurants. Destroyed shops had to be found emergency accommodation in municipally provided shopping arcades.

More of these emergency adjustments have actually taken place than one is, as a rule, aware of. The time may now, after two years, have come to take stock, and on the following pages an attempt is made to do so from the point of view of æsthetic standards. Among the newcomers in architecture and design a good many are to be welcomed, not only because one likes the look of them, but also because they stand for principles that are of deeper significance. Taken in their totality they have changed the face of the land to a surprising extent. One cannot go out into the street and walk for a quarter of a mile without running into a sign of this world of war-time terseness—a flat-roofed brick and concrete shelter or a large and cleanly drawn A on a motor car to indicate its conversion into an ambulance.

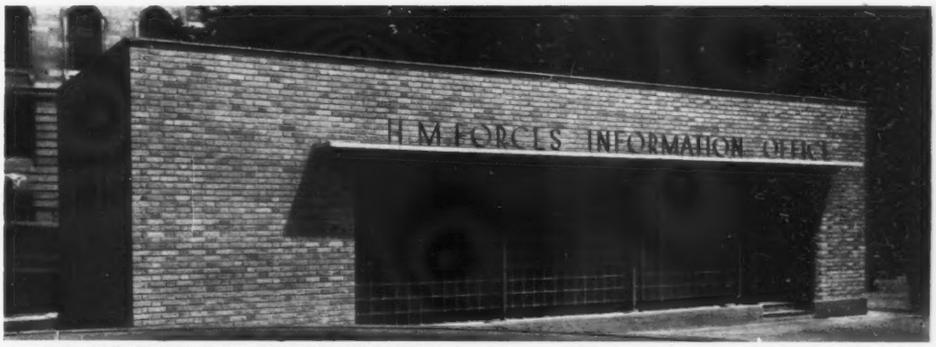
Is this transitory re-drawing of the visual pattern of Britain to have permanent results? Is it to teach recalcitrant authorities the advantages of clarity and precision? Is it to teach them an even more important lesson : that of standardisation where standardisation is useful and humanly acceptable? For nearly everything that is being built and made for emergency purposes—from the stirrup pump to the vast group of field hospital buildings assembled from pre-fabricated units—is designed for mass production. The experience of the last war pushed forward by leaps and bounds the standardisation of engineering products for peace-time use. One can well imagine that similar progress with similarly convincing results will be the outcome of this war's emergency designing.

The forty specimens of emergency design that follow do not claim to be comprehensive ; only to be typical of the new idiom which can now be seen emerging. They are placed in the Reconstruction Supplement because it is to work of this kind, elementary though most of it is, or just because most of it is so elementary and straightforward, that sensible designers after the war may look back, as to specimens of a precision of pattern and a directness of approach which was badly lacking in most of what appeared in our streets and houses before the war.

1. Building for a Re-distributed Population

One of the major social facts about this war is a temporary re-distribution of population on a scale never experienced in Britain since the late eighteenth century rush from the country into the towns. At that time architects and designers were unwilling and unable to cope with the migration ; now that the rush goes back into the country they are both eager and well equipped and could certainly master the problems involved, if the Government gave them an adequate chance. Too much, however, is still left to chance, too often the attitude still prevails that for emergency purposes anything will do.

In the case e.g. of the biggest of all regroupings, that caused by the call-ups to the services, how much satisfactory, really up-to-date accommodation is there for



1. THE GREATEST OF ALL RE-DISTRIBUTIONS, the call-up. H.M. Forces Information Office in Trafalgar Square, designed by Messrs. Joseph.

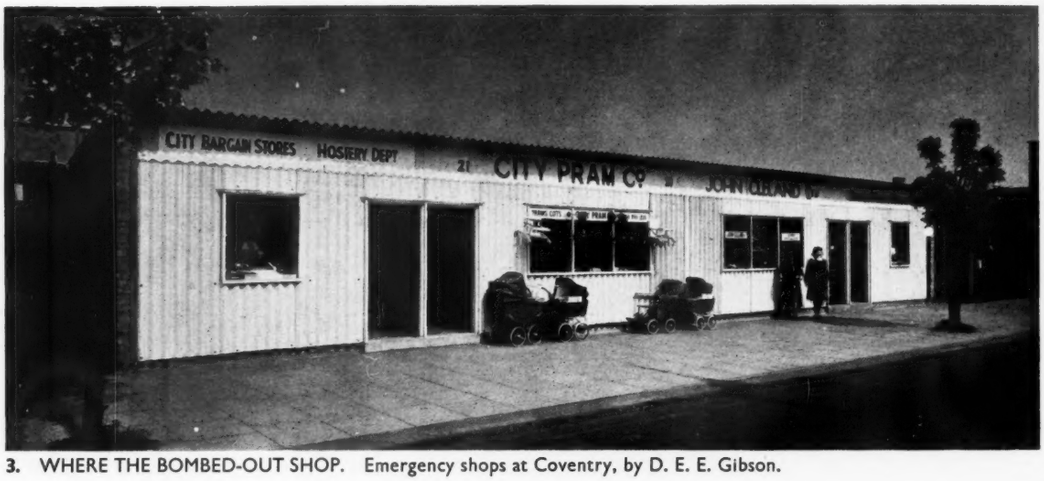
the Forces ? How depressingly few well-designed buildings can be singled out that serve the new needs of these millions. That illustrated **1** was erected in Trafalgar Square last year by the Welfare Branch of the Eastern and London Command to the designs of Messrs. Joseph. It is a day-and-night information bureau, brick-built, with a glass brick wall corresponding to the width of the main enquiry office, a clean pleasantly proportioned piece of work and the first indication in the partly Classic Revival, partly Victorian and partly Classic Re-revival square of the existence of a twentieth century style.

Of new barracks buildings there is little that can be recommended. Of new military hospitals the most interesting is of American origin, **9**. The American Red Cross and Harvard University gave it to this country. It was made in the United States of pinewood units and shipped in crates ready to be assembled over here. It consists of 22 single-story buildings which, according to the resident engineer, should not take more than three weeks each to be erected from the concrete footings upwards, if ten experienced men are available. All the framing, roof trusses and joinery are of timber, the roofing is galvanized sheet steel, the walls are faced with asbestos outside, and plywood inside.

The advantage of a building method of this kind in emergency conditions is obvious. No British material, no British factory space, no British labour (except for assembling) is used. Moreover there are advantages in prefabrication as such which apply regardless of whether the work is done by foreign or British industry. Buildings such as hospitals, camps, hostels and the like are all uncommonly suitable for standardization. Numbers of them are needed in different parts of the country. Requirements vary little according to district and site and lend themselves to production of parts in factories. It may turn out one of the most valuable architectural experiences of this war that authorities learn to overcome their misgivings about standardization and prefabrication, and that architects gain an insight into the ways in which buildings and parts of buildings can be designed so as to suit mass-production methods.

In Britain the most extensive scheme has so far been that for the erection of 289 hostels for agricultural workers, a scheme worked out by the Ministry of Works for the Ministry of Agriculture. It provides for a standard plan consisting of simple hutting units which can be made by contractors anywhere. These units and the plan were designed by the Ministry and are flexible enough to allow the local architects, in the case shown **6** and **7** Messrs. Minoprio and Spencely, to use their discretion in the grouping. Essential equip-

2. WHERE THE BOMBED-OUT FEED. Communal Restaurant in Liverpool, by L. H. Keay and W. T. Twiss.



3. WHERE THE BOMBED-OUT SHOP. Emergency shops at Coventry, by D. E. E. Gibson.

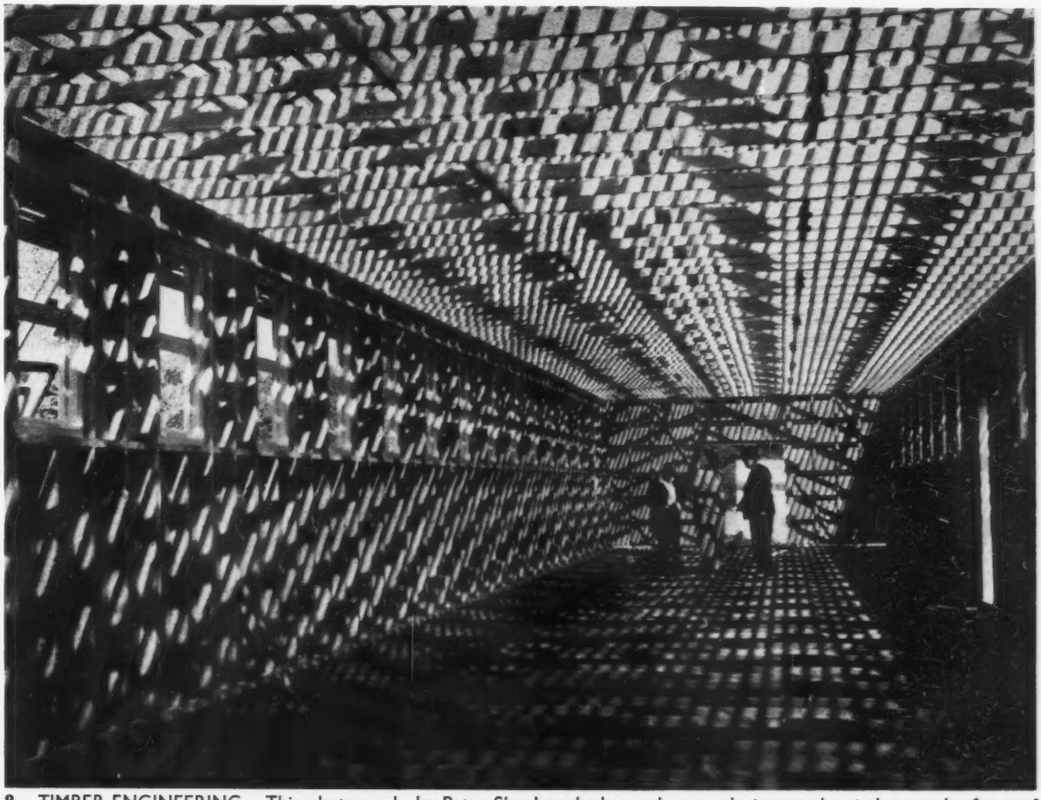
4 and 5. EVACUATED CHILDREN. Emergency Nursery School near Guildford, by Miss J. G. Ledeboer.

ment such as bedding, crockery, etc., is also supplied. Another large scale enterprise of the same type is concerned with evacuation camps for school children. Twelve such camps are planned. Each comprises dormitory blocks, and blocks for classrooms, assembly hall, dining hall, staff quarters, hospital and lavatories. All these blocks are assembled from standard cedar units. The units were designed by Sir John Burnet, Tait and Lorne. The layouts of the camps vary according to the lay of the land and the personal views of the various local architects. The Emergency Nursery Centre, **4** and **5**, was designed by Miss J. G. Ledeboer and built by the Nursery Schools Association with the aid of the American War Relief Society. It is one of two to be built at Guildford. The standard units here are of plaster-board with reinforced concrete stanchions on a concrete raft and steel trusses for the roof. The plan is a simple row of rooms, two playroom units with large south windows and one unit consisting of staff office, cloakroom and lavatories.

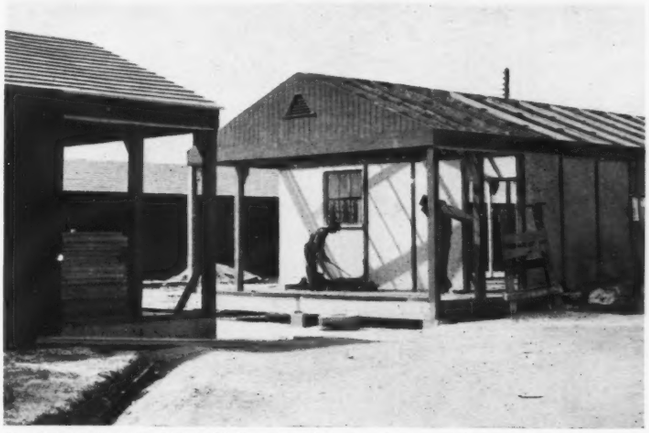
The City of Coventry and their architect, Mr. D. E. E. Gibson, were amongst the first to look at the damage done to commercial premises as an opportunity for controlled and improved design. The long row of shops, **3**, which they erected of timber with corrugated asbestos walls and roofs, is an example of how satisfactory shopfronts could be if they were not left to private shopkeepers' self-advertising enterprise. There is more of the spirit of Bath in this unassuming terrace of emergency shops than in the whole of Oxford Street.

Again the freshness and orderliness of a Communal Restaurant in Liverpool, by L. H. Keay and W. T. Twiss, compares most favourably with the meretricious gaudiness of most restaurants furnished by private pub-owners for a public of about the same purchasing power. Nor is the Liverpool restaurant lacking in cheer. The wall-painting on one wall, by Tom Mellor, is a convincing piece of decoration and by the absence of embellishment around greatly enhanced in its effect. It seems—and one is glad to see it—that the city architects on whose attitude so much is bound to depend after the war, are more conscious of the atmosphere of our age than many of those who design for commercial undertakings. Restaurants that look like this, shops that look like the ones in Coventry, frequented as they are by so many and as they probably will be over a long period, may very well change their customers' views about the modern style and thus most beneficially influence their post-war attitude to design and architecture. And, this need hardly be emphasized, a changed public opinion would make all the difference to the future of modern design.

6 and **7.** WHERE LABOURERS REST. Hostel for agricultural workers, designed by the Ministry of Works. The grouping of this particular hostel is by Minoprio and Spencely.



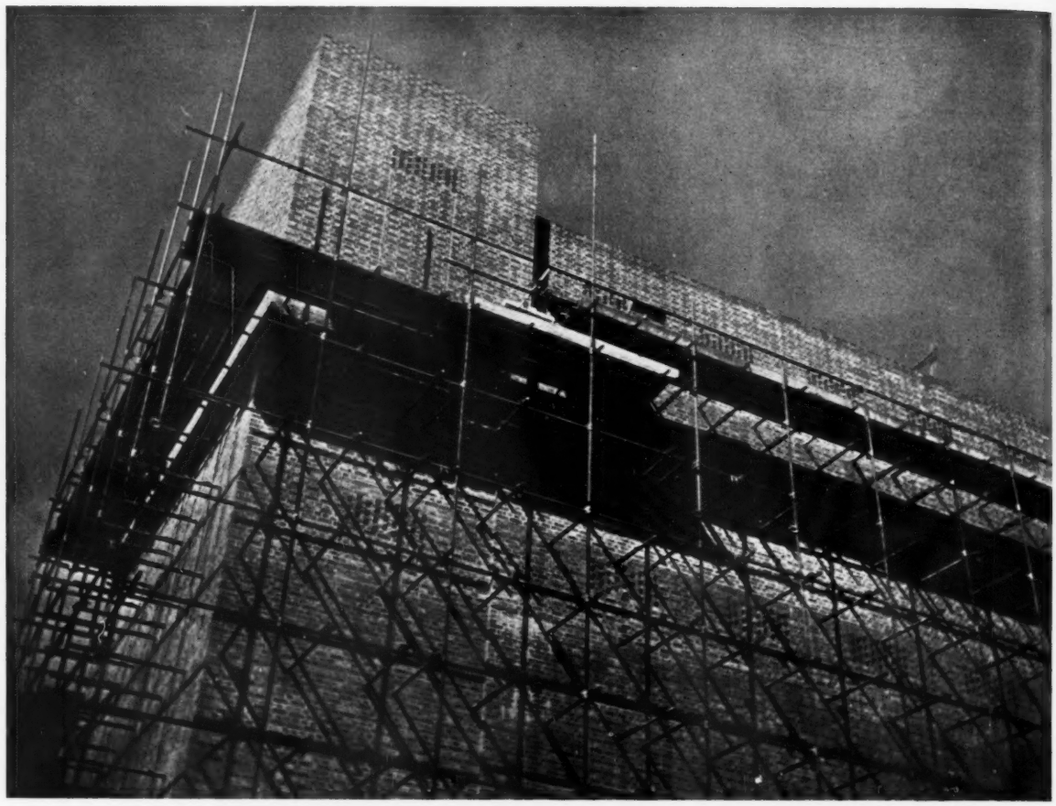
8. TIMBER ENGINEERING. This photograph, by Peter Shepheard, shows the sun playing on the timber work of one of the units of which the new national evacuation camps are composed.



9. WHERE SOLDIERS REST. Field hospital of prefabricated timber units, designed in America and presented to Britain by the American Red Cross and Harvard University.

PRE-FABRICATION.—The most important architectural contribution to wartime problems is the growing research into pre-fabrication and the growing use of standardised units for such buildings as hostels, hospitals and evacuation camps. Experiences here collected will no doubt be made use of when normal times return and with them the unavoidable first rebuilding rush. Conditions will then be different from what they are now, and building materials will perhaps be no longer those which architects now prefer to, or are compelled to, use. But if the advantages of the principle of pre-fabrication are once recognised, it will easily be possible to establish it for other media as well.

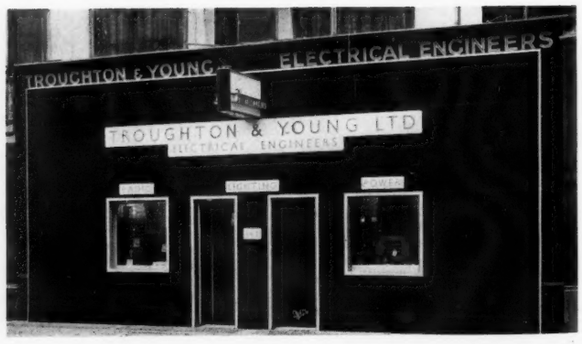
2. Protecting Buildings and Monuments



The modern movement means to most people sweeping bands of windows, vast areas of glass for shops, whole glass fronts for factories. Now we are forced into an extreme reaction against all that. The curious thing about this reversal of what appeared one of the essentials of modern design is that a public building with a plain brick front, and no windows except for small honeycombed areas wholly bricked up, looks just as strikingly contemporary. What is it that gives it this convincing appearance? What is it that introduced, the moment its windows were filled in by uncompromisingly flat and bare brick rectangles, such a convincing twentieth century rhythm into the vaguely Italianate façade of the Westminster Town Hall? What makes the dully traditional police box in the street suddenly look so up-to-date behind its new square brick screen?

Believers in modern design have for years pleaded for the abstract beauty of sheer surfaces. Now at last—and thanks only to the abnormal needs of the besieged fortress in which we live—these excitingly blank surfaces have come. Authorities that had refused to consider the advantages, let alone the æsthetic qualities, of simplicity, cannot now help admitting the one, if not the other. Will they put the clock back after the war? Or will their tastes and those of all the people whom these new monuments of architectural cubism now surround, as once the abominations of the Victorian street surrounded them, have got used to the purer and healthier food their eyes now enjoy? One should certainly not be over-optimistic. Shopkeepers, and what they have done to protect their windows, prove that by no means everybody is aware of the new requirements and their sense. Very few owners of shops have so far learnt the lesson of the day. They had to put up some shuttering. But what have they done? About 50 per cent. of them seem to be satisfied with some utility boarding of no sensibility whatsoever—quite useful, no doubt, but an overwhelming confutation of the old doctrine that fitness alone constitutes beauty. And the more ambitious have not been induced even by the war to give up their love of florid unrestrained decoration. The windows of Troughton and Young's (designed by A. B. Read) and of the Orient Line (designed by Brian O'Rooke) are rare exceptions indeed.

10, 11 and **12.** THE IMPORTANCE OF UNBROKEN SURFACES. Emergency treatment of a police station and a police post in London, both useful against blast and, the latter in its bold bareness, providing an instructive contrast to the conventionally adorned wood and glass box of the original post. Similarly the bricking up of the windows of Westminster Town Hall has drawn an insignificant Victorian building into the more concise rhythm of the twentieth century.



13 and **14.** SHOP WINDOWS. Shop-owners have sinned much against the laws that must govern emergency design. Only very few of them were as sensible and as successful as Troughton & Young's, and the Orient Line.

15, 16 and **17,** EXEGI MONUMENTUM. The monuments of London protected in different ways. A corrugated shed housed Le Sueur's statue of Charles I (until it was removed to the country), a cone of sandbags houses the Piccadilly Circus Eros, and concrete blocks transform the Artillery Memorial at Hyde Park Corner into a Dudok-looking configuration.

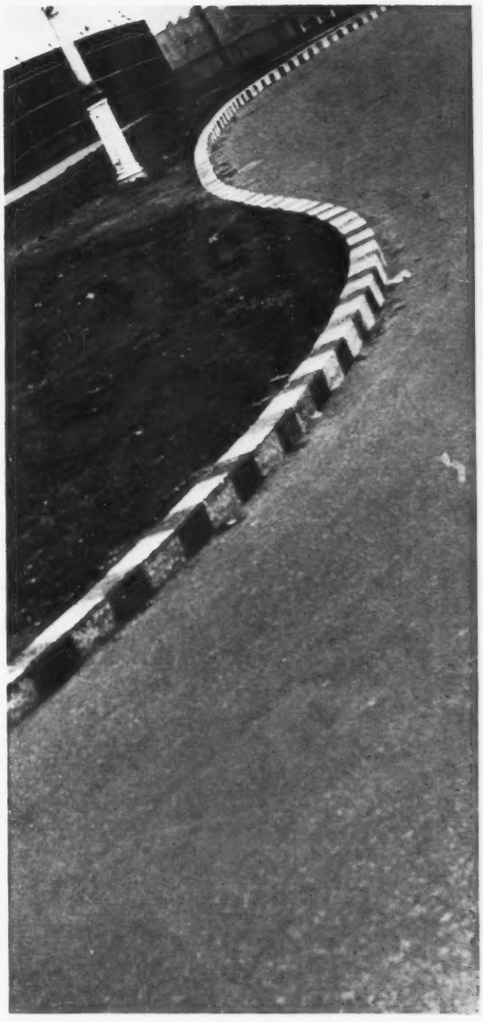
3. A New Pattern Emerges

Why is it that Cubism was conceived about 1908 and the abstract art about 1920 or 1925? Because artists had seen through the weakness of the subtle differentiations of impressionism and had got tired of so much delicacy, sensibility and *nuance*. They were pining for something strong and elementary and found it in the geometrical configurations which they worked out.

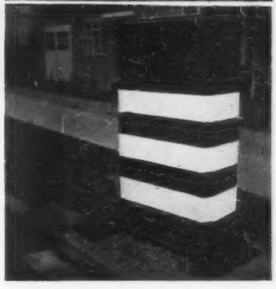
Concurrently, architects began to realize the possibilities of steel and concrete and be ashamed of the æstheticist aloofness of their nineteenth century predecessors. They now took to the problems of industrial architecture and industrial production and found out that to work for such purposes satisfactorily they had to go back to fundamentals both of function and of manufacturing technique. This Back-to-Fundamentals attitude was reflected in the appearance of their work too—and it is in this that they found themselves unexpectedly at one with the Cubists and the abstract painters and sculptors.

However, to overcome the prejudices of patrons proved very hard indeed. They were in fact not overcome until the war started and suddenly strew the country with a multitude of Ben Nicholson forms. Huge loops in the fields, **19**, humps and dents across the roads, and black and white, black and white, never ending along the kerbs of the streets, up the trees, on posts, on the lamp standards, everywhere **18, 20, 21** and **22.**

The new pattern that begins to emerge is elementary and geometrical and it has all the convincing directness that it is so difficult to achieve in a painting. The traffic lights under their cumbrous hoods are reduced to tiny crosses, and



18 and **19,** NEW MOTIFS. The snake-like effect of a street kerb in war attire ; and a modern Stonehenge—concrete pipes against invasion, a pattern as elementary and imposing as any abstract artist could dream of.



20, 21 and **22,** BLACK AND WHITE. Black and white everywhere. And where that is not enough for safety, illuminated crosses of equally convincing pattern value.

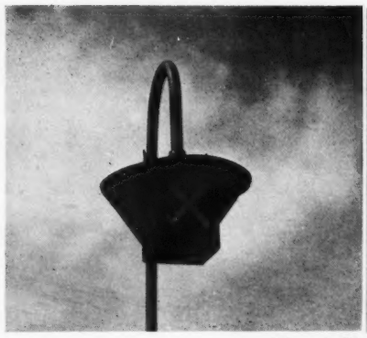
more crosses illuminated at night mark traffic islands. Street lamps seem to bend under the weight of queer black-out excrescences which, whether attached to a modern tubular standard **24**, or to a belated concrete Art Nouveau one **25**, bear the hall-mark of the machine age.

Even the little gas detectors, extremely simple, even clumsy, timber structures, play their part in setting new accents into the English townscape. They have the pleasant qualities of good children's toys, obvious shape, and unsophisticated execution from the simplest material. A new accent is again found in the boldly and, without exception it seems, satisfactorily drawn Roman capitals that label men and things. They indicate what the war has transformed them into and what they must at all times of day and night be recognized as. The W, AFS, S, FAP, A, etc., **27**, have a terseness and rhythm which was badly missing in pre-war design.

And when you follow these signs and look into the shelters or first-aid posts or ambulance cars, the same precision is to be found. The standard metal stretcher, **26**, is an excellent example of the new style, both serviceable and graceful, i.e., acceptable both as a piece of hospital equipment and as a piece of design.

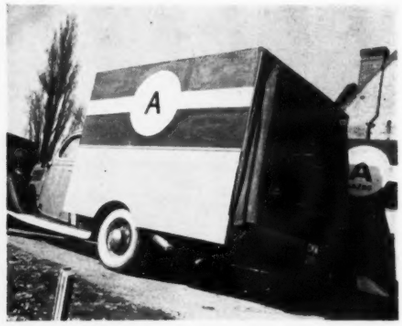
An especially striking example of the curious combination of the functional with the æsthetic that the war has produced is illustrated **28**. It is a flexible eye-shield of a transparent plastic material but has at the same time to the most amazing extent all the qualities of Moholy Nagy's art. Surely the designer of this shield, in interrupting the two side curves by the centre parabola, thought of noses only and not of æsthetic expression. Yet the resulting pattern, enhanced in its poignancy by the circular eyes on the sides and the change of material, is as concentrated a statement of the æsthetic situation of the moment as if it had been consciously conceived by an artist. In some profound stratum of reality technique and art meet.

23, SQUARE MUSHROOMS. Clumsy little structures, yet with the pleasant qualities of good toys.

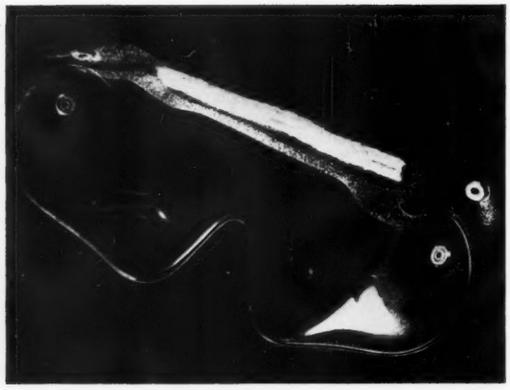


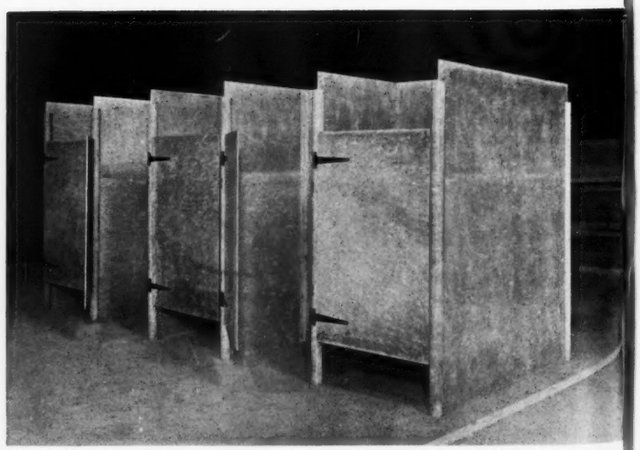
24 and **25,** OBSCURING THE ARC LAMP. Various devices have been tested and adopted. All have their functional advantages, though some are of more, some of less, æsthetic value.

26 and **27,** A FOR AMBULANCE. Plain initials in unexpected places are a significant part of the new pattern of war-time Britain. You find them everywhere—on shelters, cars, tin helmets. Their simplicity expresses the same Go-to-it attitude as the best industrial design produced by the war. The standardized metal stretchers are an excellent example of this decidedness and clearheadedness, which was too rare before the war and will, it is to be hoped, owing to the precedents of to-day, be considerably less rare after the war.



28, NOT A MOHOLY NAGY. Not art conscious but a collapsible eye-shield designed to protect wardens' and policemen's eyes from dust.





29 and **30,** NEW MOTIFS FROM SHELTER MECHANISM. Air vents of the Trafalgar Square shelters, and a standard asbestos design for lavatory cubicles.

4. From Shelter to Post

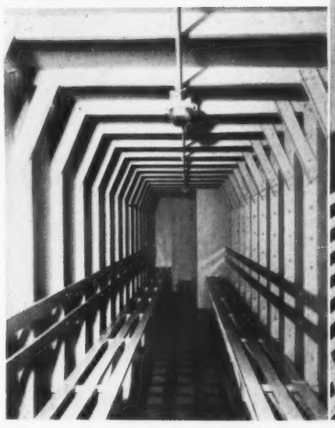
Never have there been buildings in which functional rightness was so vitally necessary as in air-raid shelters. Consequently shapes have been evolved which possess the conciseness of engineering achievements and sometimes their expressiveness, too.

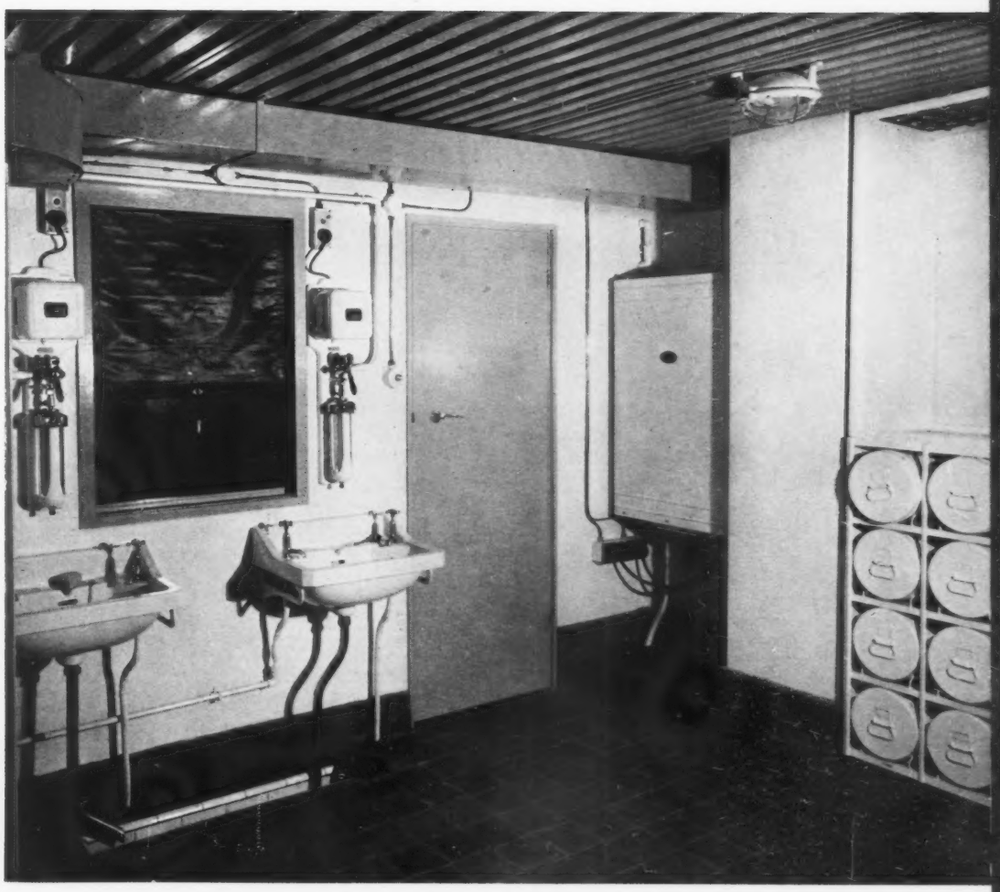
Shelters vary in size and accommodation from the metal one-man shelter, **37**, overleaf—the sentry box of the air wardens' army—to the extensive suites of rooms underneath blocks of flats, such as the one illustrated, **33** and **34**, at Porchester Gate. This, designed by Howard Leicester and Partners, consists of six compartments with tip-up seats, a large first-aid room with attached rest rooms, a warden's room with storeroom, a machine room and five lavatories. There is an emergency generating plant, a gas filtration system, and a complete water service. The shelter under a factory at Park Royal, **32**, is built of standard steel units and is large enough to hold fifty people. The spatial sensation in these tunnel-like rooms is unusually strong. While in the Park Royal shelter the wooden benches are of the most straightforward form, the Porchester Gate flats have metal seats of a more accommodating shape. The London Passenger Transport Board, after a period of research, supplied berths for the tube shelterers. The designers to the Board were faced with a demand on the largest scale. A hundred thousand people and more had to be provided for. The berths now installed are of metal construction with a wooden bottom tier and two wire-mesh top tiers.

Where shelters and posts are visible above ground, it is understandable that no borough council seems to have taken the trouble to disguise them into Tudor or Neo-Georgian. Thus wardens' posts such as **40** have a rightness of shape and proportion that makes them more often than not the only convincing piece of architecture in a whole street. Would it be over-optimistic to hope that the inhabitants of such streets by the end of the war will have learnt to appreciate this contrast between the meretricious and the genuine?

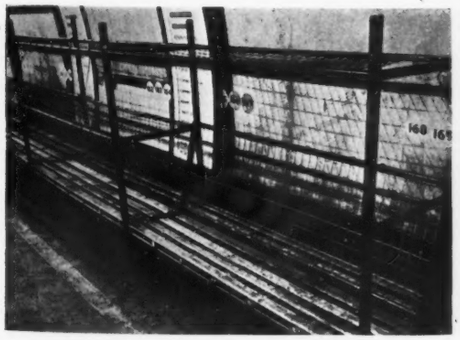
The First Aid Post at Falkirk, by Clark Fyfe, **39**, has the same quality of well-expressed efficiency. Again, will not those who have seen such posts, whether doctors, nurses or casualties, revolt against the out-of-date appearance of many

31, exit from basement shelter.



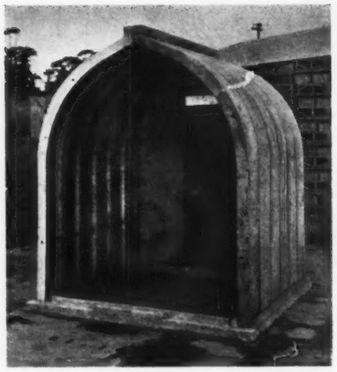


32, 33 and **34**, SHELTER EFFICIENCY. **32**, a shelter underneath a factory at Park Royal, built of steel units; **33** and **34**, one of six compartments and first-aid room in a shelter at Porchester Gate, designed by Howard Leicester and Partners. **35**, below, standard three-tier berths in the tube stations.

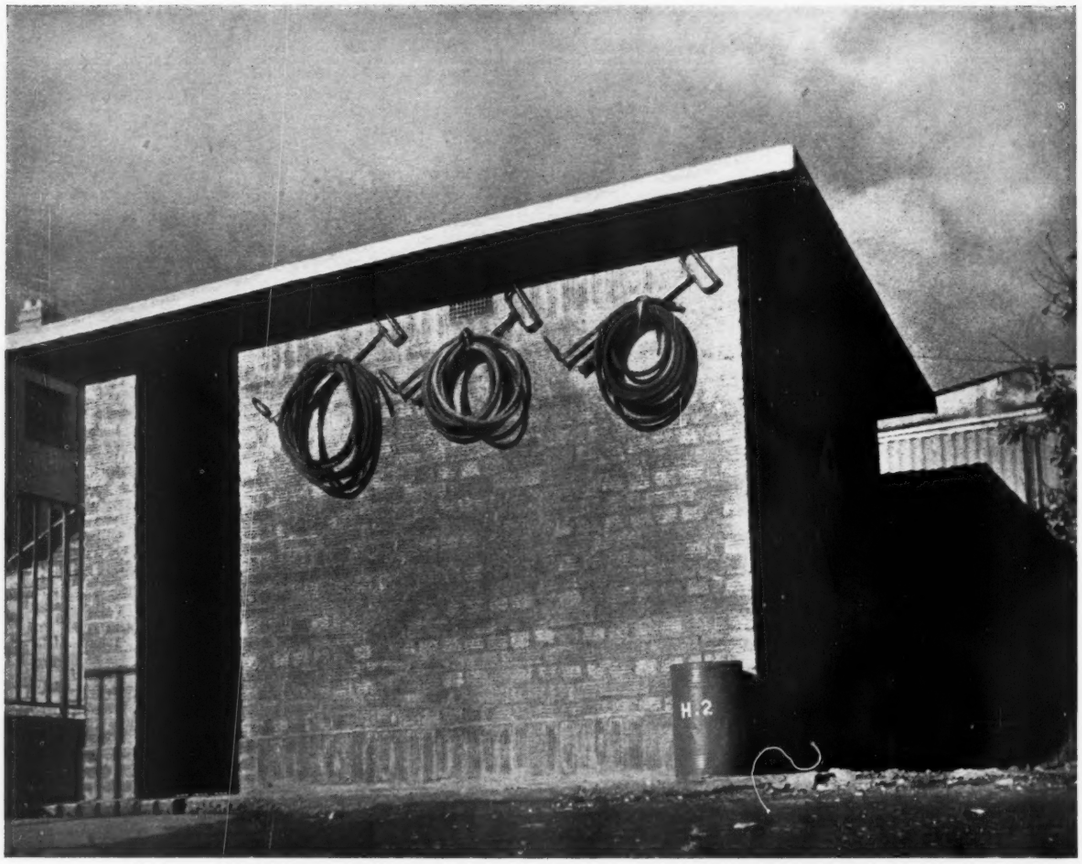


hospitals and their equipment?

The ingenious construction of the Ministry of Home Security, shelter, **38**, provides another new motif. No timber nor metal is used. The brickwork is corbelled in at the top so that only an 18-in. gap remains. Twentieth-century painters have gone to prehistoric art for inspiration. Here the vaulting technique of Mycenian and Early Celtic architecture is revived. A concrete roof closes the opening and covers the shelter. The Dormy shelter, **36**, marketed by R. Passmore and Co., is made of curved precast sections with a top flange for bolting.



36, 37 and **38,** SHELTER ÆSTHETICS. The Dormy indoor shelter consists of precast sections. The One-Man shelter, complete with seat and door, is made of steel. The Ministry of Home Security shelter of brick and concrete exclusively, to avoid the use of metal and timber. **39,** FIRST AID POST at Falkirk, designed by Clark Fyfe.



40, WARDEN'S POST WITH STIRRUP FRIEZE. This photograph and **13, 18** to **20, 23** to **29, 31** and **35,** were taken by Peter Ray for the Ministry of Information, and are reproduced by courtesy of the Ministry.

These monthly articles are frankly about the æsthetic aspect of architectural design. They are written in the belief that we can now take the practical basis of modern architecture for granted. They claim, that is to say, that we have got beyond the stage when we were so thankful for the sheer reasonableness and efficiency that the modern movement in architecture brought with it, that these were sufficient recommendation in themselves; but there is now room, in criticism as in actual design, for study of the æsthetic basis that the art of architecture postulates.

C R I T I C I S M

By Peter F. R. Donner

All, all of a piece throughout.
Thy Chase had a Beast in View.
DRYDEN.

WHEN Hitler opened the First National Exhibition of Architecture and the Crafts in Munich, on January 22, 1938, he said: "This exhibition . . . represents the beginning of a new era. For the first time since the building of our cathedrals we see here a truly great architecture, i.e. not an architecture using itself up in the service of petty everyday commissions and needs, but an architecture reaching out far beyond everyday needs." (I apologise for Hitler's style.) "We can claim for it that it will stand up to the examination of thousands of years to come and remain the pride of the people that has created it." It may be instructive to try to discover, without prejudice, whether his claim is backed by genuine achievements.

The most widely discussed architectural undertakings of the Nazis are connected with large-scale planning. The *Autobahnen* are amongst them, and certain pieces of spectacular representational architecture in Berlin, Munich, Nürnberg and other cities. Housing on the other hand—working-class estates and the like—has been monstrously neglected ever since Hitler came into power. The Nazis cannot show anything like the Vienna flats or the Frankfort and Berlin estates of 1920-33. In his address Hitler must have been thinking of buildings for the purpose of representation. It is they that must be examined to find out how much truth there is in his boasting. And to give them a fair deal, it will be necessary to consider them "frankly in their æsthetic aspects," as is the programme of this series of articles, because from a functional point of view they are all either senseless or bad: senseless in the case of the innumerable halls for mass demonstrations and parades, or buildings such as the "House of the Comradeship of German Artists" or the "House of German Transport" which corporations or companies were forced to put up to line Hitler's new thoroughfares and *rond-points;* bad in the case of most of those supposed to serve more specific purposes.

Take the monster hotel for German workers. It appeared in the state shown here in 1938, so that it was probably completed just in time to receive wounded soldiers. Its capacity is twenty thousand—twenty thousand workers out to enjoy their holidays with pay. I do not hold any brief for Blackpool, but I would have thought that holiday-makers had the right to expect a certain jollity. In the Nazi holiday-barracks there is no animation, no variety. And what strikes one as so inhuman, is not only the uniformity of the building and its mad scale, but also the actual forms—forms which, I suppose, must be called of the Modern Movement. Perhaps the soundest argument against the twentieth century style in architecture is its unsympathetic treatment of legitimate human yearnings, its lack of faith in sentiment. It is curious and very illuminating to see the Nazis, who know so well how to cash in on German sentimentality, adopt here of all the qualities of the modern style just the most inhuman. Surely Hitler, who in all his speeches on art has made his dislike of that style clear enough, cannot approve of these flat roofs, unadorned windows and concrete staircases. What may have made him overlook these detested tokens of "cultural bolshevism" (unless he admitted them because the architect was a veteran of the Nazi party), is the immense scale of the building. For sheer bigness is a quality of outstanding importance in influencing people's judgment of architecture, especially naïve people's. Discrimination between bigness and greatness does not come till later. Hitler maybe has not reached that stage in spite of his enthusiasm for building. Or was he simply less interested in this particular piece of architecture than in the buildings at Munich and Nürnberg?

This at any rate seems to be the explanation of certain—as Nazi buildings go—very acceptable qualities in my second example, Göring's Air Ministry. It was built in 1934, at a time when Hitler had his hands full with plenty of more urgent matters than art. Now Göring, though equally bent on the colossal, has a more educated taste. His Air Ministry, if built in this country, would pass as quite a happy example of moderation in the use of modern forms. The absence of giant columns, over-elaborate pediments, frills and trap-

These photographs show Nazi architecture. They are eminently characteristic of Nazi mentality. Buildings must be of an enormous size, above all, such as this hotel for 20,000 workers.

Göring's Air Ministry, just like the monster hotel, is contemporary in its idiom, more so in fact than many a recent official building in this country.

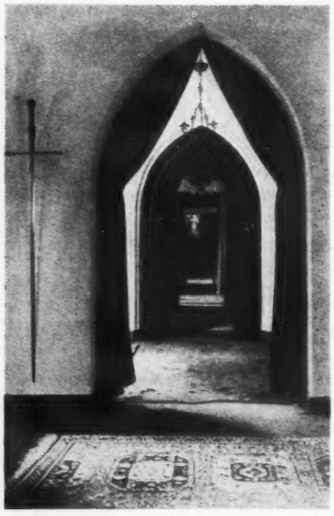
But Hitler does not like contemporary forms. He swears by the Neo-Greek and Neo-Roman, the grand, massive and ostentatious.

There is no life in such architecture. It is inhuman although its only raison d'être *is to impress the masses by means of sheer bulk and a nasty mixture of the pompous and the demonstratively taciturn.*

Hitler admits that his architecture is meant to be propaganda. He says that a State which demands sacrifices must convince the people of its greatness by colossal buildings. Yet he calls these buildings the "first truly great architecture since the mediæval cathedrals."

pings round windows would contrast pleasantly with much that British municipalities have been doing recently. Its chief deficiencies, as against even the least commendable of such British civic specimens, seem to me a dullness of pattern, and, as against anything of an idiom modern throughout, a lack of vitality. For whatever may be objected to modern buildings, their harshness, their disregard of traditions and familiar social conventions, they are—this at least stands—vitally ours. They beat the very rhythm that we feel in our blood. Now this cannot be said of Göring's ministry. The building itself appears even more monotonous and, with its unimaginative articulation of the endless façades (derived originally from the Baroque, though "deflowered" and at the same time inflated), less alive than it seems in the illustration. What remains a joy to the eye and the recollection is the appreciative use made of smooth and beautiful stone for the facing of the whole exterior, a quality absent in so much of our concrete architecture.

The use of noble materials is a feature shared with the Air Ministry by the Hall Dedicated to the Memory of the Great Soldiers of the Past, on the previous page, a room far more characteristic of Hitler's own leanings in architecture, and at the same time of all that is evil in the Nazi style. Here is the same megalomania as in the hotel and the ministry—the hall, 600 feet long and 180 feet high, was to be the centre of a vast group of new buildings in Berlin for the Supreme Command of the German Army. Here is the deification of militarism at its most Prussian. And here is also that nasty combination of the pompous and the demonstratively taciturn, the brutal and the romantic, the crude in obtaining effects, and the subtle in using them for impressing the people, which we have learnt to connect with Nazi mentality. Everything is overdone. There are no manners, no tact, no delicacy. The forms used are Neo-Classic, a Neo-Classic less fussy than ours but less human too. Hitler himself is all in favour of the Neo-Classic which—as he explained on several occasions—means to him sometimes the art of the Greeks, a people—says he—racially akin to the Germans, and sometimes Roman imperialism. And the Hall of the Great Soldiers may remind one indeed of late Roman imperial baths at their most spectacular and vulgar.



Göring's private house has the same qualities as Hitler's official architecture, pompousness, brutality and a meretricious romanticism. But whereas Hitler makes up a Teutonic Greek ideal, Göring here professes a perverted Hollywood mediævalism.

But the same melodramatic picture-palace vulgarity can also be contrived by mediævalising means. Göring's own palace in Berlin, as it was in 1934, when the illustration on this page was taken, is a typical example of this. I don't know what it has developed into since. Hollywood knows the mesmerising effect of such far vistas. The menacing sword guarding the entrance is Göring's own *condottiere* touch.

In such unclean mixtures of æsthetic and associational effects, whether they come from the producer of a film or a mass movement, it is never easy to gauge how far the producer himself likes what he places before his audience and how far he uses it consciously for obtaining certain psychological results. As for Hitler, I happen to know that he has a genuine admiration for what is most obvious in Mediterranean art, Raphael or the Mausoleum of Hadrian in Rome. Yet in looking at the picture of the enormous arena built in Nürnberg for the annual party rallies, I cannot help remembering this passage from another Hitler speech: "There is no great period in the lives of nations in which the interests of the community have not found a visual expression in great architecture. . . . Such a monumental presentation of the spirit of the community always helps to establish that authority without which no stable society . . . can exist. . . . To strengthen such an authority our buildings are being erected . . . (For) . . . the greater the demands made by our present State on the citizens, the more overwhelming must the State endeavour to appear to the citizens."

What is it then that makes Hitler regard this or the equally dry and lifeless colonnade of the Palace of German Art (by Ludwig Troost, Hitler's "lieber Meister"), last picture on previous page, as masterpieces of Nazi art? Their æsthetic or their propaganda value? He probably does not know himself. He never does. This is one of the main reasons for the impression of impurity, of something meretricious, sham, dishonest, that in spite of the excellent materials, grows upon you the longer you look at the arena or the exhibition palace.

Those to whom architecture as a language of abstract form does not immediately express such qualities need only look at official German painting to find the fullest confirmation. I wish I could show one or two of the performances of the President of Hitler's Corporation of German Artists. He goes in mainly for nudes, and Hitler no doubt likes them and would call them conceived in the Greek spirit. In fact, they are academic pretexts for presenting in a decidedly nasty close-up manner stripped models. More details are shown than the pictorial conventions of the last centuries allowed. Now Jan van Eyck, e.g., is just as realistic in an anatomic sense as these Nazi painters. But with him one feels at once the thrill of the discoverer proud of seeing for the first time after the long rulership of mediæval idealism Nature in all her fullness. With the Nazis, architects as well as painters, it is all a surreptitious gratification of vulgar instincts concealing themselves to secure outward dignity under a Neo-Classic disguise. Hence these diluted Greek motifs, this over-obvious symbolism, these hackneyed compositions—all dodges to achieve an easy appeal with the masses (and the Führer) and hide the Beast in View.

COUNTRY CRAFTSMEN

The Windsor Chair Maker

By Thomas Hennell

MR. GOODCHILD, of Knap Hill Common, High Wycombe, is the last of the Wycombe chairmakers to do the whole job himself, and unassisted. In this he is an exception among skilled craftsmen, who according to our common ideas have been driven by mass-production to specialise in some part and detail of the manufacture in which their fathers were masters of the whole process. That this generalisation may be fallacious is proved by the fact that Mr. Goodchild's father was not a maker of whole chairs, but only an *adzer* of chair-seats. That is to say, one who shapes the curved upper surface of Windsor chair-seats from the flat plank. So the present Mr. Goodchild is not simply the sole survivor of a race of craftsmen who knew and practised their craft from A to Z; but he is one of those exceptional natures who cannot rest content with less than a complete knowledge and practice of their calling, in which they are the developers of new and original designs.

No one probably knows more than Mr. Goodchild about the Windsor Chair; for he has gained certainty, the fruit of lifelong experiment and curious inquiry, about the making and fitting of its parts and the quality and fitness of all the tools for that purpose. He has repaired chairs of one and two centuries old, and in taking them to pieces no subtlety of form, workmanship or material has escaped his practised eye. In his shop, besides the ordinary chairs with beechen legs and backs and seats of elm, are chairs made of yew, cherry and oak. At our first visit there happened to be some thick planks of magnolia and acacia-wood, cut to the outline of chair-seats but with the surface as yet unworked into curves. Taking up one of these blank seats, Mr. Goodchild set it on an ancient oak board by the shop's threshold, and steadying it under one foot began with apparent carelessness to swing a large hollow adze upon it, chopping out a series of rounded chips. The heavy and extremely sharp tool was handled with as much freedom and expedition as a stick of charcoal in the hand of an accomplished artist: as we watched, the double curve at the front of the seat appeared, and the hollow in the centre, while it was evident that a flat margin of exactly the intended breadth and outline had been left round back and sides, and not one unnecessary stroke had been

Mr. Goodchild, the maker of Windsor chairs, at work.

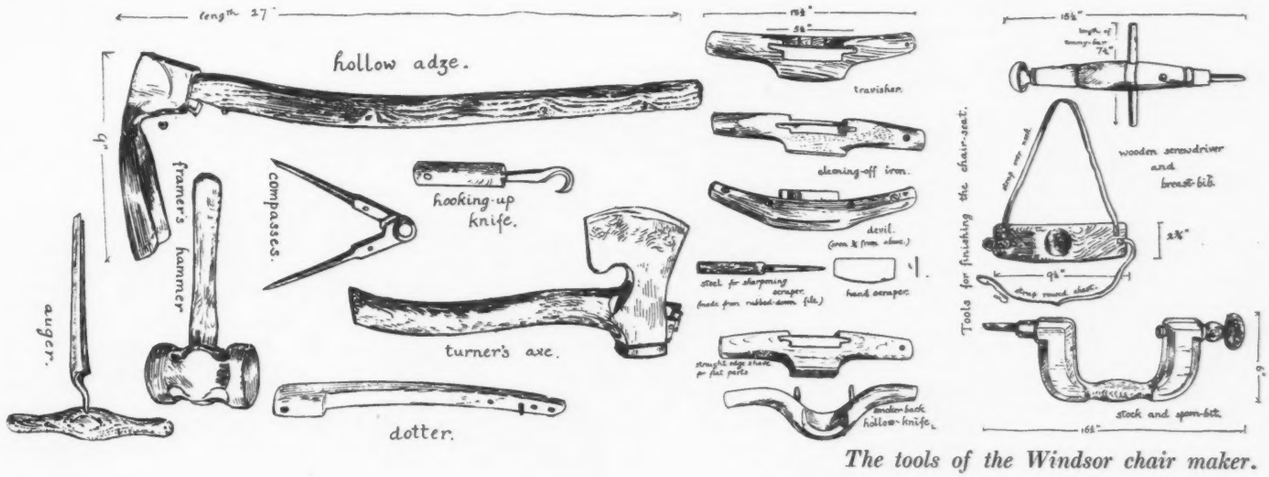
made with the adze. We noticed that the handle of this adze was not only smooth-polished from use, it was actually worn into deep depressions where the thumb and fingers of both hands had grasped it. Shaping elm chair-seats with this tool had been the elder Mr. Goodchild's daily employment throughout his life. And this adze-handle had probably outlasted several steel heads; for though the blade is heavy it is kept keen as a razor. Stooping to pick up my pencil I chanced to touch it lightly with the back of my hand; it instantly drew blood.

Mr. Goodchild told us that he liked to adze out one or two seats at a time and then turn to different work; it is evidently the hardest and most exhausting part of chair-making: and has been generally superseded by machines. The first machine invented flaked out the curves approximately, and left as much shaving and scraping as before to be done by hand. But a second is a form of routing-machine which gets nearer to the finish intended.

The board for the seat is one-and-a-half inches thick and eighteen inches square, and is shaped with a band-saw and jig to the characteristic outline, straight in front, with a shorter straighter projection at the back. The "blank" seats are sent from the factory to Mr. Goodchild to be adzed-up and finished. Formerly a *long saw* was used in cutting them out by hand, a larger edition of the saw illustrated, the blade of which is tightened by a tourniquet.

When the chair-seat has been adzed it is not immediately polished, but holes are bored on the underside for the four legs, and from above for the bow (this is fitted on either side *outside* the back legs) and for the sticks and banister which form the chair-back. The holes for the front legs are bored upright, but those for the back legs are set outwards and rearwards. The distance between them is measured but the inclination is judged by eye.

The legs and stretchers (the horizontal supports connecting them) have been turned on the treadle-lathe. In this work a boy sometimes assists, for it is nearly impossible to hold an absolutely steady chisel whilst



The tools of the Windsor chair maker.

supplying the motive-power with one foot. The chair-legs are made of split beech-logs, shaved up with a drawknife on the frame and seat called a "horse." Only two or three chisels are used: the pattern is a narrow board with a few "nicks" in it, placed between the chucks and under the leg which is being turned. The swelled curve of the leg, and the rings upon it, appear swiftly and as if inevitably.

The legs are wedged into place between three "cog-pegs" which are inserted in the bench, and marked by a simple gauge or *dotter*. These marks are drilled with the stock and spoon-bit to take the stretcher. The front and back stretchers are also marked and bored at their middle points, to take the cross-stretcher. The three stretchers then form a horizontal H, whose free ends are now fitted into the four legs. Then the legs are fitted into the seat.

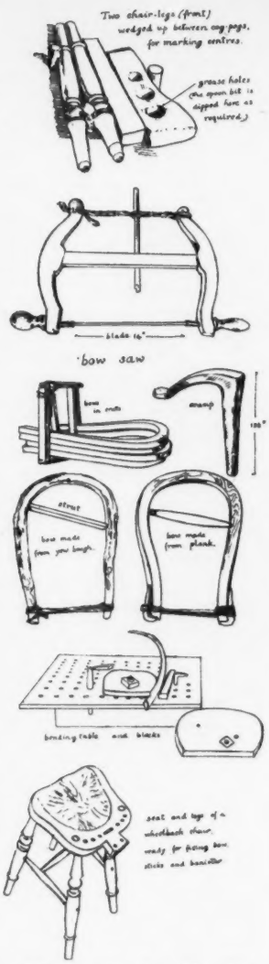
The remaining work on the seat is done when it is set up in this manner, and the tools illustrated are used for perfecting its shape in the following order. The *travisher*, a shave with a nearly straight edge, but just sufficiently running-off at the sides; the *cleaning-off iron*, a narrower but similarly shaped blade; then the *devil*, a steel edge set vertically through the wooden hand-piece, and the *hand-scraper*, which is this piece of steel with its handle. There is a right way of sharpening the scraper and of holding it so that it will work. Its edge is not keen, but is formed of two angles, and is used with the oblique surface behind. To sharpen it a steel burnisher, made from a hard bradawl or of a file which has been ground smooth, is used. The last tool is the narrow *straight-edged shave* for the flat parts. The chair-maker provides his own wooden handles.

The chair-back is framed with a *bow* of which both ends are fixed in the seat. This bow is generally cut from a piece of plank, steamed and bent round a *block* which is clamped upon the *bending-table* by means of pegs and wedges. When dry it is removed and packed in a *crate* with others (so that their free ends are held to the same position) and where necessary a *strut* is fixed to maintain the shape. Sometimes, as in the old yewtree chairs, the bow is made not from a plank but from a bough, which is roughly squared before being bent, and more carefully shaved-up when it is used.

The holes for the sticks and the mortise for the banister are cut in the upper part of the seat, and the ends of the bow are "boxed in." The sticks and banister are set up into the seat, compasses are used to find the centre of the bow, and the positions into which the sticks must fit are marked with pencil. Then the bow is taken out and fixed with wedges between the cog-pegs with its ends upwards; the mortise for the banister is cut and the holes for the sticks are bored. So the chair is then fitted together, the heavy broad-faced *framer's hammer* being used to drive the parts home.

When chairs were made for export they were not fitted together: the seats had to be finished and the holes and mortises made, without the advantage of having the chair set on its legs. So it was held on to the bench by the weight of a heavy iron *cramp*, under which it could be shifted without losing a moment. A long screw-cramp is also used when necessary for bracing together the legs and stretchers, especially if it be a high chair with several stretchers. I never saw any glue used, but, whether used or not, there it was on the stove; a simmering glue-pot being the one companion indispensable to any carpenter's happiness.

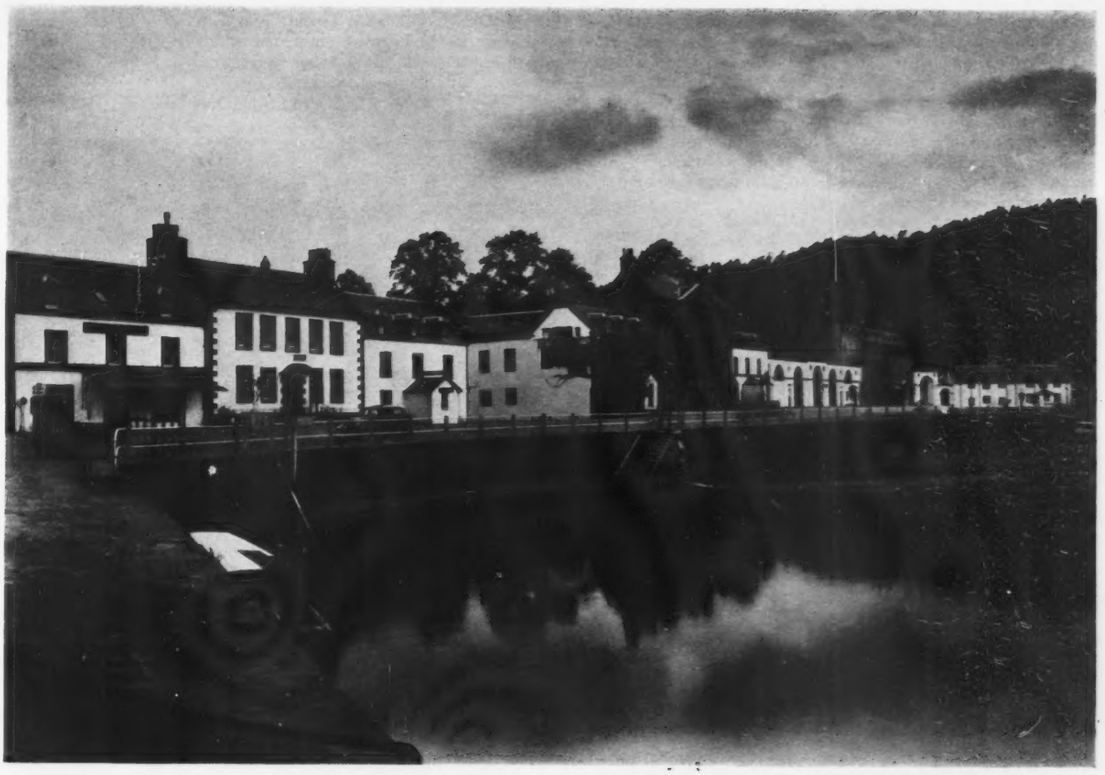
The names of the commonest varieties of chair made here are the Windsor wheel-back (so-called from a small ornament in its banister), the fiddleback, the smoker (an armchair), the "Chippendale," the church chair and the child's chair. A large chair of the smoker type had come in for repair, its wooden seat being most surprisingly worn through. The explanation was that it had been used in a chapel to mount the preacher, who stood on the seat and grasped the bow, marking his points with his foot.


Two chair-legs (front) wedged up between cog-pegs, for marking centres.
grease holes (the spoon bit is stopped here as required.)
blade 16"
bow saw
bow in rough
cramp
strut
bow made from bough.
bow made from plank.
bending table and blocks
seat and legs of a wheelback chair, ready for fitting bow, sticks and banister

The parts of a Windsor chair.

The treadle-lathe for making chair-legs.

Scottish Vernacular



This is Inverary, the tiny county town of Argyllshire on Loch Fine, a perfect example of the sturdy, short-spoken, dignified character of Scottish rural architecture. The illustration, and the others on this page, are from "Building Scotland," by Alan Reiach and Robert Hurd, reviewed below.

A building, because it is unadorned and white-washed, need not be without charm. The Conon Bridge Hotel, about 15 miles north-west of Inverness, proves that. The white houses of Inverary on the left are a reminder that the simplicity of the contemporary Scandinavian style is by no means alien to British and especially Scottish tradition.

BOOKS

Scotland, Please Note.

BUILDING SCOTLAND : PAST AND FUTURE. A Cautionary Guide by Alan Reiach and Robert Hurd. The Saltire Society, Glasgow. Price 2s. 6d. net.

A QUARTER of a million houses, they say, will have to be built in Scotland after the war. And that is not counting the replacement of existing houses which may yet be knocked down by the Luftwaffe. The people who will live in these houses must be schooled, doctored, entertained, admonished, and so on in a whole series of appropriate buildings. There will be factories, too, one hopes ; railway stations, garages, slaughter-houses—and shops, of course. Altogether a piece of work big enough to depress or exalt anyone just thinking about it. The remembrance of what happened to Edinburgh after the last war is sufficient reason for depression. That the finest approach, possibly, to any city in Europe, a dramatic but ordered transition from the decent Lowland countryside of the Lothians to the sophisticated urbanity of the eighteenth century capital, should have been so utterly ruined does not make one hopeful for the future.

Though our fathers did build water towers disguised as Gothic fortresses, moat and all, and pretended—knowing perfectly well all the time that nobody could possibly be taken in by it—that an assurance office was really a Greek temple, how do we dare criticise what was, when compared with what we have done to Edinburgh in our generation, a rather engaging and at least an academical whimsicality ?

Pondering this, the prospect of yet another post-war period of Scottish architecture is not encouraging. Yet there is no doubt that a tremendous building campaign will be undertaken after the war *and* carried through—*at all costs*—in that appallingly uncompromising Scots' fashion. So let us prepare for it as long ahead as possible : that the blow may be softer.

To soften the blow is the whole object of this excellent cautionary guide. Its effectiveness lies chiefly in its restraint : the absence of exhortation in the sparse letterpress, the observance of the first rule of all cautionary guides : that the pictures shall tell the story (*vide* those drops of blood falling, falling, from Struwwel Peter's scissor-punished thumbs).

The method the authors have used is *contrast*. A decent, white-harled Highland kirk, date uncertain because its fitness to do its job in that particular part of the world is so apparent that there is no need to ask snob questions about date, or influence, or style, faces something from an early twentieth-century urban district, something shocking, evasive and inhibited to its smallest quasi - ecclesiastical detail. Ducal - designed, eighteenth-century Inverary rebukes tenements on Clydeside, product of century-later *laisser-faire*. An inn at Conon Bridge, deep-walled, leisurely-windowed, makes a public house in one part of Edinburgh look as uncomfortable as people living in another part of the city could wish it to be.

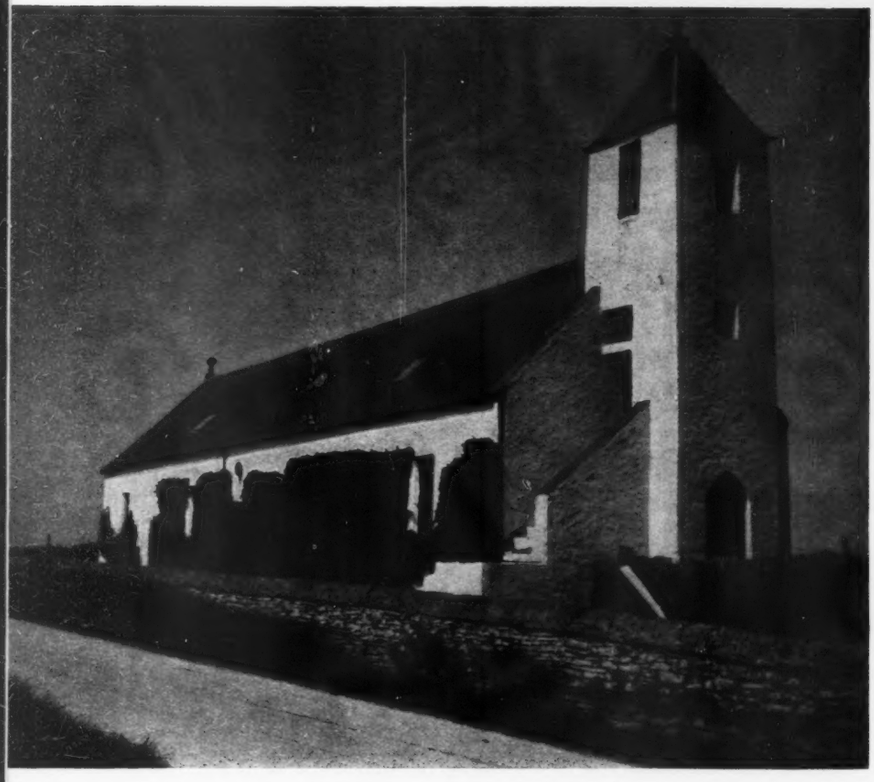
When it has been possible to find examples in

Scotland herself of buildings which, because they make sense in design, observation of tradition and use of material may supposedly be useful as guides to buildings tomorrow, they have been used. When it has not been possible, current examples from other countries have been introduced to shame or inspire, as the case may be; the Rue de Rivoli, for instance, enjoys nothing like the superb position of Prince's Street, which, in spite of that, manages to "bicker from end to end, an unseemly commercial brawl."

This is not just a picture-book; beyond a stock shot of the Modern Athens there is not a familiar view in it: not a castle, not an abbey. There is so much good ordinary, everyday stuff in Scotland without the show pieces: in those small discreet burghs, in the farmsteads, in harbour towns where the sea has always been a dictator of architectural style, places like Aberdeen and its neighbouring towns where the material in which they build is sterner than the sea itself, evolving an æsthetic, the æsthetic of working granite, which obtains nowhere else in these islands.

It is with this kind of building—or rather with the question of its legitimate succession—that this book is concerned. Nevertheless, if an unregenerate Scot—and most Scots *are* unregenerate where architecture is involved—should come across it an overwhelming nostalgia is certain to beset him if, uninstructed, he should look at the *wrong* side of the page first. For what is that cast-iron memorial fountain in the parking place, the wind-blown washing in the waste plots, those Institutes, those Infirmaries, but Scotland herself?

R. P. ROSS WILLIAMSON.



There is an almost barbaric force in the squareness of the white church of Reay, Caithness, right up in the north of Scotland, and the stumpy squatness of the tower of the Town House at Crail, Fifeshire. The church of Reay especially, with its completely unmoulded openings, is the type of building to which progressive architects in Scotland have looked ever since Mackintosh, and will have to look again and closely after the war.

Scottish Vernacular

British Heritage.

ENGLISH CHURCH CRAFTSMANSHIP. An Introduction to the Work of the Mediæval Period and some Account of later Developments. By Fred H. Crossley. London: B. T. Batsford, Ltd. Price 8s. 6d.

ANCIENT ENGLAND. A Review of Monuments and Remains in public Care and Ownership. By Edmund Vale. London: B. T. Batsford Ltd. Price 10s. 6d.

THE chief merit of the *British Heritage* series of Batsford's, which now counts some twenty-five volumes, is the number of excellently photographed and excellently printed plates they contain. The two books here to be announced sell at 8s. 6d. and 10s. 6d., and have 225 and 121 illustrations respectively. As for the texts of the series the various volumes are of uneven quality and character, a few aiming at something like comparative completeness in covering their ground, others only at pleasant presentation. Some are the work of experts who may have spent a long time in preparing them—Mr. Crossley's is one of them—others are no more than "a middleman's job," written for the average sightseer. Thus Mr. Vale calls his volume.

Mr. Crossley knows his subject inside out. His *English Church Monuments* is still the standard work on the subject. In this new book he manages to pack a lot of interesting data into only 115 pages. They will serve their purpose well, I should think. Yet he does not somehow get to the essence of things. Maybe this is due to the specialist's absorption in detail. One feels all the time a lack of historical perspective beyond immediate necessities of dating. Works of art are not linked up with the spirit of the ages that created them. Unfortunately the plates which might have made up for this deficiency are not arranged to form pictures of historical logic either. Thus "Figure Detail, Early and Late, from 13th to 15th Centuries" shows Early Perpendicular on the left, 13th century in the centre and on the right, and no 14th century. This must confuse notions of development, and it applies by no means only to that one plate.

Mr. Vale's point of view is no more that of the genuine historian. Otherwise he could not have chosen the arbitrary limitation of his book to monuments under public care. This makes any coherent treatment of the growth of styles impossible.

What would, however, have been possible and what some readers looking at the sub-title of the book may have hoped to find in it is an account of the problem behind any preservation of ruins, the conflict between the educational and the sentimental points of view, between the appeal of the building tidied up to make its original state and its historical significance as clear to the mind as can be achieved, and the appeal of the building in picturesque decay. But this conflict is only touched on by Mr. Vale. He seems on the whole to sympathise with the romantic cause (p. 68: "No! No! Science is good, but the castle fan must have his morbid moments—it is part of the fancy.") Only the first chapters dealing with prehistory, the Romans and the Anglo-Saxons are in a loose chronological arrangement. After that the book is simply divided into sections on castles, ruins of monasteries, and the English House (the latter by Mr. Harry Batsford, because Mr. Vale's text seemed too short to Mr. Batsford "for what he wanted to express in illustrations"), and castles and monasteries are again not discussed as representing the changes of style through the middle ages, but topographically. Special emphasis is laid on Wales, which is useful, because on the whole Welsh architecture is neglected by English scholars. To give an impression of the kind of remarks accompanying the enumeration of buildings under the care of the Department of Ancient Monuments of the Ministry of Works or the National Trust or some other authority, the following, which goes with an exceedingly good photograph, may be quoted: "Middleham Castle (Office of Works) has one of the largest Norman keeps in ground plan, though it was not carried up for more than two storeys. It is surrounded by a range of buildings in the manner of the courtyard castle to which access from the keep was gained by means of a bridge—an unusual plan. Personal interest centres round the castle in that it was held by Richard, Earl of Warwick, the King Maker, in the height of his power. It was from here that Edward IV made his escape while being kept prisoner by the Last of the Barons." Nothing more than that. I leave it to the reader whether he would have preferred some more information on the forms of a comparatively unknown castle and at least a date or two, or feels satisfied with the remarks quoted and such more poetical descriptions ("the old gaffers of the villages") as he finds in other cases.

PETER F. R. DONNER.

Another Step towards Victory

SINKING OF THE BISMARCK

from a painting by C. E. TURNER

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ANTHOLOGY

The Old Regent Street in a Blitz

Regent Street was coming down . . . I think that was the final reason for leaving London that I gave to that lady novelist—that Regent Street was coming down. As who should say: "Oh Troy town, tall Troy's on fire!"

She said: "Why not? Surely Swan & Edgar's have a right to enlarge their premises. You must move with the times." I think sometimes you shouldn't!

I had heard that they were to tear down and re-edify Swan & Edgar's corner, the throbbing heart of the Kingdom, of the Empire, of the Universe, and hideously restore the Quadrant and convert the Palladian curve of Soane's [*sic*] Regent Street, with its broad and gracious sweep, into a congregation of reinforced-concrete mud-pies, so many-storeyed that they would make the broad street look narrow and squalid—and yet so low that they would have none of the soaring dignity that great heights will give to roads till they look like cañons at the foot of great crags! And what made it the more bitter was that the land of Regent Street belongs to the Crown. For a little paltry gold that which should preserve not only the liberties but the beauties of its lieges was ruthlessly to destroy the most beautiful street in the Empire.

And what made it the more bitter still for me was this: One evening of a great air-raid I had been on leave and in pitch-black silence had wandered out of the jetty darkness of Glasshouse Street into the dimness of London's Great White Way beneath the stars. The white, Greek houses loomed against the celestial pin-points, like temples, like forums. And it was as if, awfully, they listened, awaiting doom . . .

The minute was majestic; it had been as if I were alone in a vast cave, the heart of a city that had paused in its beat. . . . And the houses all listening. . . .

FORD MADOX FORD

(*It was the Nightingale*, Heinemann, 1934)

MARGINALIA

Frank Pick

There was, perhaps, no other man in England during the last twenty-five years who had so extensive and so beneficial an influence on architecture and design as Frank Pick, who suddenly died on November 7 at his house in the Hampstead Garden Suburb.

Frank Pick's name will to the future historian of twentieth century London be inseparably linked with the rapid development of metropolitan transport, a development, thanks mainly to his energy, exceptionally straightforward. The result of his thirty-four years of work is that London can claim to have one of the most efficient transport organizations in the world. That it is also the best designed anywhere, was Frank Pick's greatest personal pride.

It was due to him that Edward Johnston's lettering was introduced, that L.P.T.B. posters were amongst the most consistent in displaying modern design—both by recognized and as yet unknown artists—and that L.P.T.B. architecture stands out amongst all other British official or semi-official architecture.

Frank Pick was an early D.I.A. member, then an intensely active chairman to the Council for Art and Industry, founded in 1934. He had been made an Hon. A.R.I.B.A. in 1932. He left his position as Vice-Chairman of the London Passenger Transport Board in 1939, after having been chiefly responsible for the organization of the London evacuation scheme. He was then asked to investigate the problem of the speedier discharge of cargoes at British ports, and about the middle of last year—probably because of his unique experience in speeding up and tidying up things—to join the Ministry of Information as Director General. He left the Ministry about a year ago and went on to preparing a report on British canals, the findings of which have been essentially adopted.

To some people, Frank Pick seemed formidable. But those who knew him and whom he accepted—that meant as a rule the Go-to-it sort of people—he was kind, frank and untiringly helpful. What he detested more than anything was polite inertia. This explains, perhaps, why he was able to make such a spectacular success of the L.P.T.B., but failed at the Ministry of Information.

"Christ Church Mall"

Considerable interest has been aroused in Oxford by a recent pamphlet with the above title, published under the signature, "Carfax." It is a plea for the construction of a new road, before further development prevents it taking the most efficient course, along the south side of Christ Church Meadows, with the object of by-passing The High. The author's arguments deserve most careful attention. The following are some extracts:

The open country south of Oxford extends from the Abingdon road on the west to the Iffley road on the east, and consists chiefly of the (Christ Church) meadow . . . and some sports grounds. Through Oxford (at the time of writing) runs, from west to east, one of the finest streets in Europe, known as The High. It is entirely a university street, occupied by university buildings frequented by the studious, together with ancillary buildings such as book and old-school-tie shops. A few years ago it was cobbled and regularly weeded, and the studious roamed it at large, lost in thought.

Now Industry has raised its head in the east and Commerce in the west (together with a railway station) and traffic of another kind possesses the street. Study is disturbed and the studious, perturbed, have to make undignified dashes under murderous wheels. The cobbles have been replaced by tarmac and there was some talk of replacing this by rubber with a view to reducing the noise and also the vibration which threatens the life of the ancient buildings; but such expedients are but palliatives and the nuisance would remain scarcely abated—worse, the nuisance will continue and increase if, as may well be supposed, the motor traffic doubles itself in the next twenty years.

In the meantime the cows continue to chew the cud in Christ Church meadow.

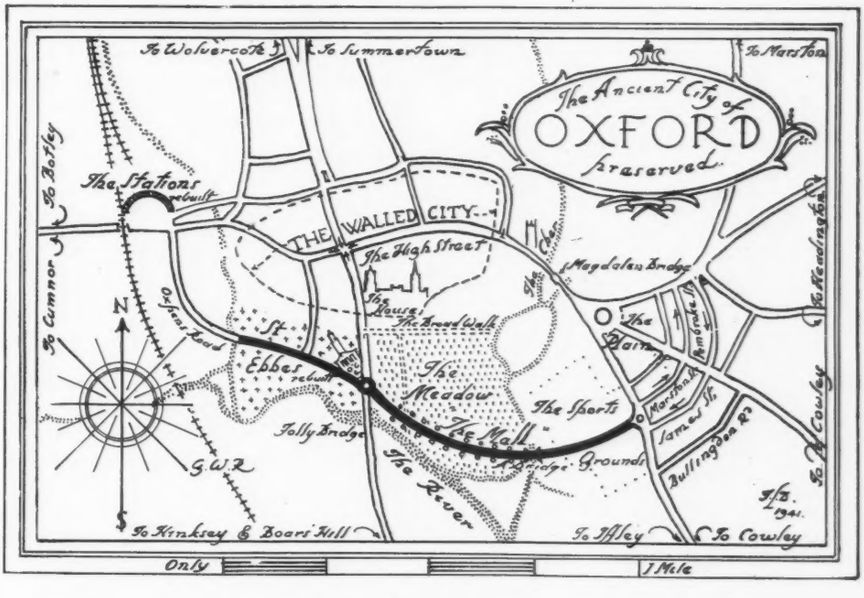
Note, in passing, that this traffic in The High is local traffic, not through traffic; on Thursday afternoons the street is quiet.

Looking at the map, you will find on the Iffley road, about where stands the Church of the Society of St. John the Evangelist, Marston and other roads that run up to the Cowley road and on to the Headington road and to Marston, and you will see that it would only break through a very little obsolete property (already partially demolished) to make a way through from Christ Church meadow to a point just north of Folly Bridge on the Abingdon road.

Now there are roads and roads and there is no reason why a road should not be a beautiful thing. Imagine a wide road, raised a few feet only (except at a bridge across the Cher), with grass verges, gravel paths and open balustrades, and planted with trees, with Oxford rising up on one side and the Thames flowing close beside it on the other—there's richness! Running from the Iffley road to the Abingdon road, it would take the traffic off The High and link up the Industrial East with the Commercial West.

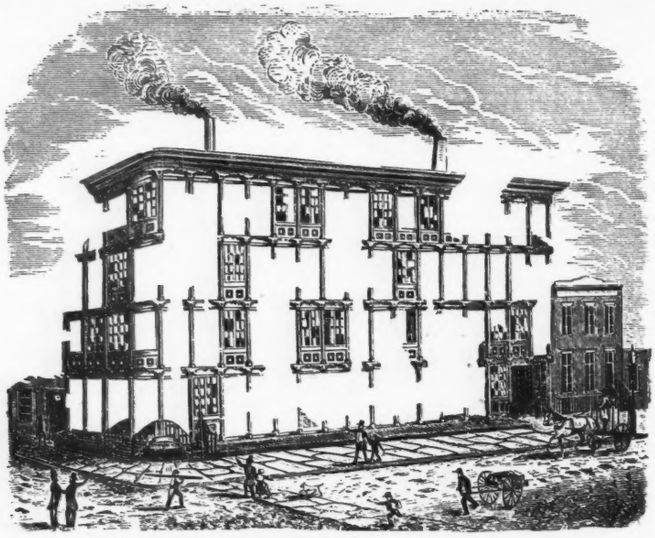
. . . At the Folly Bridge end of this Christ Church Mall we have a roundabout and . . . running from the station to the slums of St. Ebbe's, we have Oxpens road; join this up to our roundabout and you have done five things well worth doing:

1. Given the University back its High Street.
2. Opened the cul-de-sac of St. Aldate's.
3. Relieved the congestion at Carfax.
4. Avoided the eventual widening of Magdalen Bridge with all the destruction that entails.
5. Redeemed the shameful squalor of St. Ebbe's which is only allowed to continue because no one ever passes through it and which, being in the



A sketch map of the centre part of Oxford, showing the suggested course of a new road along one edge of Christ Church Meadows, on behalf of which arguments are put forward in a pamphlet mentioned on this page.

BLAST-PROOF ARCHITECTURE



Surrealism in 1856. This illustration is one of the many pleasant surprises in Dr. S. Giedion's new book, *Space, Time and Architecture*, on which a preliminary note appears on this page. Dr. Giedion treats Borromini and Le Corbusier just as illuminatingly as James Bogardus, the New York inventor who in a book on *Cast Iron Buildings* drew this modern ruin to prove that an iron framework would stand up even with, as he writes, "the greater part removed or destroyed by violence." Strengthened in our views by recent experience, we may be inclined to argue that to inhabitants the advantage remains doubtful, if only a front, be it ever so subtly balanced out, remains upright. The surrealist flavour of the wood engraving is considerably enhanced by the subtle pertinacity with which the two chimneys keep smoking in spite of the destruction around, the coolness with which the gentleman walks up his front stairs into the ruins, and the complete lack of rooms behind the brick front on the right. Dr. Giedion proves in the most interesting and most instructive section of his book, which is that dealing with the nineteenth century and the introduction of iron and steel into architecture, that James Watt was the first to design a factory with iron columns and iron beams, but that the United States were the pioneers of cast iron in commercial architecture of a more representational character.

heart of the city, is of the highest potential value.

An essential part of the plan is the position of the road where it crosses this noble pasture. Placed on the edge of the meadow, it would not appreciably reduce its expanse and, if sufficiently clear of the river walks, it would not destroy their charm (they would go under the new Cherwell Bridge). The existing trees would clothe the Mall whilst its avenue was agrowing and nothing be lost.

This is the only possible position for the road; further north it would destroy the meadow, further south it would lose its efficacy and involve enormous cost in bridges. It would be an attractive and unimpeded route, and this is one of its practical advantages, it would be preferred to one equally direct.

These contentions being conceded, a coherent policy of planning and reconstruction can be laid down.

But this road is primary and fundamental. It would, by itself, immediately rejuvenate the town and create a wonderful feeling of emancipation. The traffic would at once begin to circulate instead of continually working shuttlewise across Carfax. While it is complete in itself, it opens up all sorts of possibilities which would then rank for consideration.

"Space, Time and Architecture"

The above is the title of Dr. Sigfried Giedion's new book, the contents of a course of lectures which he gave at Harvard University in 1938-39, printed on 600 pages with well over 300 illustrations, and just published in this country by the Oxford University Press, at 25s. It is a remarkable book written by a remarkable man. Dr. Giedion is known to architects chiefly as the Secretary of the C.I.A.M., the Congrès Internationaux d'Architecture Moderne. He has, however, also won the esteem of historians of architecture by two books which he brought out in 1922 and 1928. The first dealt with the style of 1800 which is most convincingly split up into a Late Baroque and a Romantic tendency, the one pointing backward, the other forward. The second was about the origin of modern French architecture in the discoveries of nineteenth century engineers.

In his Harvard course Dr. Giedion has incorporated and widened his earlier research. It is now combined with chapters on the Great Exhibitions, nineteenth century developments in America, the precursors of the modern movement in the nineties, the history of town planning and a discussion of topical planning problems. A detailed and illustrated review of the book will appear in one of the next numbers of THE ARCHITECTURAL REVIEW.

The Preservation of Old Buildings

Mr. John Summerson, Deputy Director of the National Buildings Record, recently read to a meeting of the Architectural Association a paper entitled "The Place of Preservation in a Reconstruction Programme."

This is a subject peculiarly susceptible to prejudiced judgment and sentimentality, and is too often allied with a restrictive instead of a creative attitude to planning. Mr. Summerson's paper, which was remarkable for its sound sense and clear thinking, therefore deserves to be quoted at length.

The following are some passages from it:

When is a building a work of art? I don't think there is much difficulty about that question if we remember that no artistic product is an isolable thing. Refer the building to the individual or school which produced it. Compare it with other buildings from the same hand or source. If these stand out as a group exemplifying in a conspicuous way the genius of an age, the building you are concerned with stands a good chance of being worth considering as a very precious object. If, in addition, the building is among the principal works of a man of acknowledged genius, an innovator, a leader, well then you have what can, I think, be placed in the first and principal category of buildings deserving protection. I admit, of course, that the conditions suggested here are open to various interpretations. You and I and Sir Reginald Blomfield and Mr. Goodhart-Rendel may have equally clear-cut but not identical views as to who are the really great figures in English architecture; and some critics may take the view that each and every building, whether by a great man or not, should be assessed objectively on its merits. This, however, is quite certain to lead to endless altercation; æsthetic judgments supported by historical analysis are more stable and lasting. My own list of the great English architects from Wren onwards would consist, besides Sir Christopher, of Hawksmore, Vanbrugh, Robert Adam, Chambers, the younger Dance, Soane, C. R. Cockerell, Pugin, Butterfield and, perhaps, one or two others. I am prepared to consider applications from other candidates, but I believe that any building by any of these men is as likely to be stamped with original genius as, say, a satire by Swift, a painting by Reynolds, Romney or Blake, or a poem by Gerard Manly Hopkins. They were architects who took minute pains with their work; all of them possessed phenomenal imaginations, and I would emphasize here a fact which cannot be too much stressed, that we do in this country possess buildings which are witnesses to such powerful artistic achievement that they ought to be given the greatest consideration in any question of demolition arising out of reconstruction plans.

Now a word or two about my second category—buildings whose virtues are the routine virtues of a widespread school of architecture. The obvious example is the Queen Anne or Georgian house. These survive in their hundreds and thousands and I think any region of town or country would be the poorer if all were swept away. But here preservation must be selective, co-ordinated. And one of the points I want to stress is that preservation in general is only of value when it *is* co-ordinated and related to a plan of positive development. The planned survival of old structures can enrich a town enormously. An unplanned snatching of isolated buildings from unplanned development will result in pathetic patchworks of obsolescence.

Thirdly, there is the building which is an accretion of beauties rather than a meritorious unity in itself. The small medieval parish church is typical. Our old parish churches are all local pantheons, consecrated museums which are in the highest degree worth preserving. They are incomparable treasure houses of history and art. There is the primitive structure itself, the work perhaps of five consecutive centuries, each of which has left its curious imprint; the Saxon quoining, the Norman enrichment, the varieties of tracery and moulding, the mass dials and masons' marks, the effigies and brasses, the screens and bench-ends; the ineffaceable scars of the Reformation and the new harvest of Renaissance craftsmanship, the arabesqued pulpit, startling "waxwork" effigies of the early 1600's, theatrical baroque memorials of Queen Anne's time, delicate marble tablets of the Regency; then the Victorian accretions, the brass altar cross, the tiled chancel, the two-manual organ with Hosanna painted across the pipes. And, lastly, the memorials, often so crude but always so eloquent, of the warfare of our own time. Many countries possess churches as fine and finer than ours. But no country has fitted its churches with such vivid detailed witnesses of parish life . . . .

To what extent should we respect the purely literary and associative values which a building acquires through having been the habitation or resort of great men? Look at some of the past results of this curious practice. I am glad that in this country (excluding Scotland) we have never given way to the craze for preserving birth-places, usually the least significant structures in any man's life (incidentally, the increasing use of hospitals and maternity homes should solve this problem absolutely for future generations).

I believe we should preserve the houses of great men only when architecture comes into the picture *as* architecture; and chiefly when this architecture is itself eloquent of the mind which inhabited it. Abbotsford, yes; Garrick's Villa at Hampton, yes; Scott's birth-place, no; Garrick's birth-place, no.

The last of my five types of architecture which may merit preservation is the humble building—farmhouse, barn, cottage, dovecot—which may give a flush of historic colour to a rather monotonous district. Here are few difficulties and many opportunities. The "continuity value" of so simple a thing even as an old brick wall, when it can be gracefully dovetailed into a plan, is considerable. But preservation of this kind is much on a level with the protection of trees, a pleasant asset of which the skilful town planner who knows his site and thinks beyond his drawing board will naturally avail himself . . . .

Many of our towns—the towns which one hopes we shall be replanning after the war—possess what is usually referred to by town-planners as the "historic centre." This consists of an astonishing lamination of architecture which would take a whole shelf of Mumfords to analyse in detail. The "matrix" is medieval and a few Tudor gables jut out in the High Street; the one where Cromwell is conclusively proved not to have slept is an antique shop; another is the Nell Gwynne Cakery. These are the much-photographed "old bits." The remainder of the High Street is 70 per cent. Georgian—I should say 35 per cent. because the shop fronts have eaten up half the façades and sash windows peer over the enormous flashing facias of the chain stores—that commercial regiment which has given the British Isles a perfectly standardized shopping street . . . .

It is not altogether a satisfactory picture. It is a distressing fact, but to enjoy the bloom of untouched antiquity you must go to a town which is not thriving; a town dependent on a stagnant agriculture, where the great stores do not think it worth while to cash in, where land values are low and demolition is not worth while.

Now, this "historic centre"; what is to be done with it? Some will wish to protect it as a whole, because of its romantic intricacy, its impregnation with history.

I sympathize with their sentiments, but I submit that they form no basis whatever for preservation.

It is impossible to preserve the "character" of a place when the life in that place has completely changed. This feeling for "character" is literary, evanescent, intangible; it can be fixed in the shape and rhythm of words but not in the stones of buildings. Here is an example of what I mean. You come to a strange town on a

[continued on page xxxviii

THE NEED FOR WASTE PAPER

Architects are in an unusually good position to help supply the country with waste paper, of which 100,000 tons are required immediately for munition-making. They have great quantities of drawings, specifications, correspondence and so on which are no longer needed. Every architect is asked to hunt through his plan-chests, cupboards, files, drawers and attics, and to do it now.

St. Mary's Church, West Walton, Norfolk

THIS was a tower of refuge, for the inhabitants, from the disastrous floods that occurred in the seventeenth century, as recorded by the following literal copy of an inscription in the church:— "*To the immortal praise of God Almighty that saveth his people in all adversities be it kept in perpetual memory that on the first day of November 1613 the sea broke in and overflowed all Marshland to the grate danger of men's lives and loss of goods. On the three and twentieth day of March 1614 this country was overflowed and on the twelth and thirteenth of September 1670 all Marshland was again overflowed by the violence of the sea.*" 'PUDLO' Brand waterproofer is a tower of strength in the constant fight against flood and dampness. Our experience of such work over more than thirty years, and the long record of successful results obtained by its use, offer the best assurance of your satisfaction.

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CEMENT WATERPROOFER

It is tantalising, but inevitable, that so many of the interesting jobs in which 'PUDLO' Brand waterproofer is now being used must remain "unheralded and unsung" until after the war. In place of the illustrations that cannot be used, we are pleased to publish a series of drawings of East Anglian monuments; these drawings, in pen and wash, are the work of Leonard Squirrell, A.R.W.S., R.E., who, by the verdict of his fellow artists, is placed in the ranks of the foremost British landscape draughtsmen.

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continued from page 184]

persuasive roseate evening. You stroll down streets where you know nobody, where nobody knows you. You are charmed by what seems timeless and stationary. You are soothed by apparent stability. You notice only the things you like. In a street of Georgian houses you picture respectable, well-to-do families living lives not very different from what their ancestors lived—perhaps in the same houses. The picture is partly true. The large old houses and the comfortable middle-class ménage are still there. But as a whole, the picture is a fake. It is changing fast. The large old houses become untenanted, are made into offices or flats. The old families break up and live in urban flats and rural cottages. The "character" of the place—the bloom of a certain kind of life lived in certain surroundings is a thing that you cannot fix.

The moral is : do not try to preserve what you cannot preserve—"character." Aim at things which have the permanent values of architectural order and real artistic quality. They are often worth preserving not only for their own sake but as parts of a town highly adaptable to certain phases of modern life. Almost every town, for instance, has a quarter laid out in Georgian times and comprising the best individual houses, streets, crescents or squares. One finds professional men naturally gravitate to this area : it is quiet, well-planted and the houses are roomy and light. In any plan for reconstruction it may well be considered as an enclave of professional life.

The most notable example of the "professional enclave" are, of course, the Inns of Court in London. They were built as such and still serve their purpose remarkably well. Where they have been damaged by bombing, I cannot see that anything would be gained either by replanning them or rebuilding them on substantially different architectural lines . . . .

I imagine that in a few years there will be a certain amount of reorganization within the Church of England : there will be an attempt to get rid of the weaker units in its structure by merging them into larger and more effectively staffed units, better related to the present distribution of the population. Any move in this direction will result in large numbers of churches becoming superfluous and the Church will wish to disencumber itself of their upkeep and, where convenient, dispose of their sites.

The question what to do with unwanted churches cannot be burked simply by protests against the Establishment from those who never enter a church except to enjoy its architecture, peruse its monuments and experience that sense of the confluence of past and present which becomes so real in these lonely, evocative buildings. The Church has its work to do and for this work it may not need all the churches it has inherited from the past. What is to be done with them ?

The country parish churches are the least problematical. Most of them are regularly used ; few are likely to form obstructions to planning. There are, however, those often beautiful derelicts, built by Georgian squires, half for their own vanity, half for the spiritual benefit of a minute congregation of agricultural tenants, now quite deserted, enchanting, melancholy and locked.

In the towns there is a higher proportion of unnecessary churches, owing to the outward shift or change in character of the population. There are the churches built under private acts in the 18th century and under the Church Building Acts of the 19th : enormous rectangular galleried structures. Sometimes architecturally good, sometimes not. Many of these, I have no doubt, will have to be removed sooner or later. The important thing is that the best of them in each area should be scheduled as architectural valuables and, unless there is overwhelming evidence for their removal on town-planning grounds, preserved. They could, I suggest, be secularized and placed in the hands of a commission charged with leasing them for appropriate purposes and preventing incompetent alteration and disfigurement. One must admit that the number of such churches which could be satisfactorily used would be small : but in some cases they would make good halls or might be fitted up as branch libraries. Their architecture is, as a rule, curiously independent of their function. They were sharply criticized for this when they were built, but this original sin renders them reasonably adaptable for modern and secular purposes.

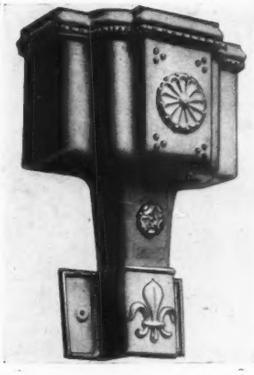
Conspicuous in this category are, of course, the London City churches by Wren and others, for the retention of which architects and antiquaries have been keeping up a running battle for thirty years. About one half of the fifty surviving churches have now been destroyed by enemy action. Should they be rebuilt ? This should depend, in my view, on carefully weighed considerations in each separate case.

1. The capability of the church to be rebuilt as its architect designed it, taking into account the condition of the ruins and the virtual impossibility of reproducing vanished craftsmanship and memorials.
2. The merits of the church as a work of art. The quality of Wren's churches varies enormously. Some have his personality and scholarship stamped all over them. Others have not. The whole world admires St. Stephen's, Walbrook. But I doubt whether anybody has ever seen much to admire in St. Mary, Aldermanbury, or St. Andrew by the Wardrobe.
3. The position of each building in relation to planning schemes. Here I should like to enter a plea for the consideration of preservation as part of the planners' programme. Fully annotated schedules of buildings to be considered at an early stage in the proceedings and not left till the plan has become crystallized.
4. Lastly, there is the general consideration how these churches can be used. If rebuilt, can they be used ? That must be determined by the Church.

There is sure to be a great drive from some quarters, after the war, for rebuilding Wren churches, and we must keep in front of our minds the element of futility which this would involve. The extremists should ask themselves whether they intend to rebuild the churches as they were before the war or as they were when they were new. Are they to have the distinct Anglican character which Sir Arthur Blomfield and Samuel Sanders Teulon and Sir Gilbert Scott impressed upon them ; or are they to have the box pews, three-deckers and unstepped chancels for which they were planned ? Or are they to compromise between Wren architecture and modern church arrangement ? I can imagine some quite charming churches based on such a compromise, but they would not be Wren churches, and unless they are going to be used, are such compromises really worth building ? I doubt it. One must not generalize about these buildings. Each case must be considered on its merits. Personally, I do not think it reasonable that more than two or three of the gutted churches should be rebuilt. What would St. Lawrence, Jewry, be without its superb woodwork or St. Nicholas, Cole Abbey, without its grandiloquent display of mercantile memorials ?

Here are two suggestions for what might be done with some of the destroyed churches. One church—I should favour Christ Church, Newgate Street, or St. Bride's—could be rebuilt as a Wren Museum. In the body of the church and the well-lit galleries there could be models of all the churches, vanished

[continued on page xl



For post-war restoration work use cast sheet lead, cast lead rain water heads, cast lead gutters and pipes.

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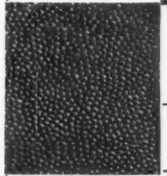
FACTS ABOUT GLASS FOR ARCHITECTURAL STUDENTS

No. 6 – Figured Rolled Glass

NOTE: Figured Rolled Glass comes strictly into the same category as Cathedral Glass (dealt with in Information Sheet No. 5). Each is a rolled glass, one surface of which has a definite texture (Cathedral) or pattern (Figured) obscuring vision partially or completely according to the depth and configuration of the texture or pattern. The glass may be either tinted or untinted, and the texture or pattern imprinted by either the table or the roller. The process of manufacture may be either intermittent or continuous.

FORMAL PATTERNS: A deeply impressed formal pattern gives a high degree of brightness to the glass. Direct vision through the glass is almost obscured.

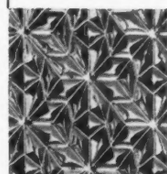
	Manufacturing Sizes	Thicknesses	Weights (per sq. ft.)	Light Transmission (giving considerable diffusion)
ARCTIC	White: 120″×48″ Tinted: 100″×36″ or 90″×42″	⅛″ and ¼″	1½ lbs. and 3½ lbs.	80% to 85%
ARCTIC (Small)	White: 120″×48″ Tinted: 100″×36″ or 90″×42″	⅛″ and ¼″	1½ lbs. and 3½ lbs.	80% to 85%
JAPANESE	White: 120″×42″ Tinted: 100″×36″ or 90″×42″	⅛″ and ¼″	1½ lbs. and 3½ lbs.	75% to 85%
KALEIDOSCOPE (Large)	White: 120″×42″ Tinted: 100″×36″ or 90″×42″	⅛″ and ¼″	1½ lbs. and 3½ lbs.	75% to 85%
MAJESTIC	White: 120″×42″ Tinted: 100″×36 ″or 90″×42″	⅛″ and ¼″	1½ lbs. and 3½ lbs.	75% to 85%
RIPPLED	White: 120″×48″ Tinted: 100″×36″ or 90″×42″	⅛″ and ¼″	1½ lbs. and 3½ lbs.	75% to 85%
MURANESE	White: 120″×42″ or 110″×47″ Tinted: 100″×36″ or 90″×42″	⅛″ and ¼″	1½ lbs. and 3½ lbs.	75% to 85%



DIFFUSION PATTERNS: A deeply impressed pattern giving a high degree of brightness to the glass. Direct vision is completely obscured, with very little loss of light.

	Manufacturing Sizes	Thicknesses	Weights (per sq. ft.)	Light Transmission (giving almost complete diffusion)
MOROCCO (Pinhead)	White: 120″×48″ Tinted: 100″×36″ or 90″×42″	⅛″ and ¼″	1½ lbs. and 3½ lbs.	80% to 85%
MOROCCO (Small)	White: 120″×46″ Tinted: 100″×36″ or 90″×42″	⅛″ and ¼″	1½ lbs. and 3½ lbs.	75% to 85%
MOROCCO (Large)	White: 120″×48″ Tinted: 100″×36″ or 90″×42″	⅛″ and ¼″	1½ lbs. and 3½ lbs.	75% to 85%
AMAZON	White: 120″×42″ Tinted: 100″×36″ or 90″×42″	⅛″ and ¼″	1½ lbs. and 3½ lbs.	75% to 85%

COMPLETE DIFFUSION AND OBSCURATION PATTERNS



A deep geometric pattern is impressed, giving a high degree of brightness to the appearance of the glass and complete obscuration with very little loss of light.

KALEIDOSCOPE

Manufacturing Sizes: White: 120″×42″. Tinted: 100″×36″ or 90″×42″

Thicknesses: ⅛″ and ¼″

Weight per sq. ft.: 1½ lbs. and 3½ lbs.

Light transmission: About 75% with perfect diffusion.

TINTS: Available in thirteen standard tints.

USES: Largely used for partitions in offices and warehouses when direct vision is not desired. Also for window glazing of warehouses, factories, etc., where Wired Glass or the heavier Rolled types of glass are not considered necessary.

SPECIFICATIONS: In preparing specifications, the following clauses should be included for glazing:—

(1) General Clause: All glass to be of the type, quality, and substance specified, and to be of British manufacture. The glazier must be prepared to produce at the completion of the job invoice or voucher from the manufacturer to show that the glass is of the specified standard.

(2) Glasses should be described by the recognised trade terms, thicknesses and qualities.

This is published by Pilkington Brothers Limited, of St. Helens, Lancashire, whose Technical Department is always available for consultation regarding the properties and uses of glass in architecture.

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and existing, together with drawings and photographs.

The other suggestion is that certain churches could effectively remain as ruins. I am not thinking so much of the Wren churches, most of which are too utterly burnt, as of majestic shells like Hawksmore's gutted church of St. George-in-the-East and Archer's Church of St. John, Smith Square. The latter has now been burnt out twice, but the shell is as sound as ever and remains perhaps the most remarkable product of Baroque art in this country. If it is not wanted as a place of worship, why not let it remain as a shell, a witness—and a beautiful one—of the acts of these times as well as of its own.

The D.I.A.

The annual meeting of the Design and Industries Association was recently held at the R.I.B.A., and the following Council were elected :—

President : the Lord Sempill.

Vice-Presidents : Mr. Harold Curwen, Sir Ambrose Heal, Mr. Charles Holden, F.R.I.B.A., Sir James Morton, Mr. Frank Pick, Mr. Hamilton T. Smith, the Rt. Hon. Josiah Wedgwood, the Lord Woolton. (Above are ex-officio members of the Council).

Chairman : Mr. F. R. Yerbury, Hon. A.R.I.B.A.

Vice-Chairman : Commander V. H. Goldsmith.

Treasurer : Mr. J. W. Waterer.

Members of Council : the Lady Sempill, Miss Himsworth, Messrs. W. J. Bassett-Lowke, R. Dudley Best, Lt.-Gen. Sir John Brown, Messrs. N. L. Carrington, F. Chippendale, F. E. Courtney, G. R. W. Crowe, G. Dunn, T. A. Fennimore, John Grey, C. E. Gane, W. H. Hall, G. A. Jellicoe, B. C. Joseph, Lt.-Col. Maxwell, Messrs. R. D. Russell, H. G. Strauss, M.P., M. Hartland Thomas, V. V. Tatlock.

The Council of the Association has decided to organize an essay competition amongst schools on the subject of "The house I would like to live in, with its equipment and furnishings."

Change of Address

As from November 1, 1941, Gyproc Products, Limited, change their address from Great Burgh, Epsom, Surrey, to "Westfield," Upper Singlewell Road, Gravesend, Kent. Telephone : Gravesend, 4251-4. Telegrams : Gyproc, Gravesend.

The registered office remains at 21, St. James's Square, London, S.W.1. Telephone : Whitehall 8021.

The Buildings Illustrated

Whitwood Mere Infants' School, Castleford, Yorks.

Architect : Oliver Hill.

Consulting Engineers : B. L. Hurst and Price.

Quantity Surveyors : Grimwade and Ainsley.

Electrical and Heating Engineer : H. A. Sandford.

The general contractors were Paul Rhodes, Ltd. Among the subcontractors and suppliers were the following : Redpath Brown and Co. Ltd. (structural steelwork), Carter and Co. Ltd. (tiles), Cork Insulation and Asbestos Co. Ltd. (cork), Burn Bros. Ltd. (drains), Ruberoid Ltd. (roof covering), J. Gliksten and Son Ltd. (doors), Venesta Ltd. (plywood and veneer fittings), Robert Adams (Victor) Ltd. (ironmongery), W. and R. Leggott Ltd. (ironmongery and window control gear [opening gear]), E. Hill Aldam and Co. Ltd. (ironmongery and window control gear [sliding folding gear]), John Bolding and Son Ltd. (sanitary fittings), F. Braby and Co. Ltd. (window control gear [ventilator shutters]), Hailwood and Ackroyd Ltd. (electrical installation), Troughton and Young Ltd. (electrical installation), Pearsons Ltd. (heating and ventilating), General Electric Co. Ltd. (electric fires), Luxfer Ltd. (metal windows), Pilkington Bros. Ltd. (glass concrete construction; dome lights), John Ellis and Son Ltd. ("Emalux" special plaster), Granitese Ltd. (special plaster), Cellon Ltd. (paint), Manders Ltd. (distemper), Asbestos and Rubber Co. Ltd. (lino : wall linings), Andrew Bentley Ltd. (blackboards), Backhouse Nurseries (York), Ltd. (garden work), Grahams Nurseries (garden work).

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